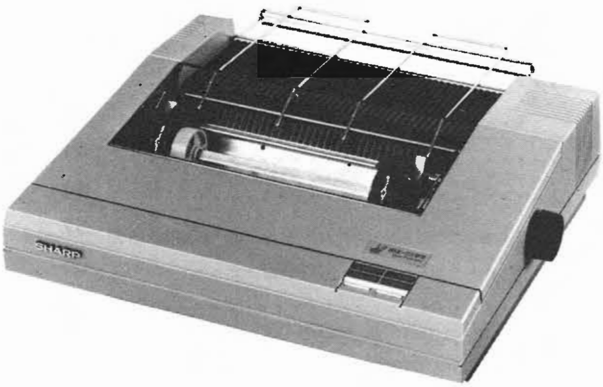
MZ-80P5

SHARP SERVICE MANUAL

PDSM281007-MZ



Dot Printer

MODEL

MZ-80P5 (EARLY)

IN THIS MODEL THE CHARACTER GENERATOR CHIP IS IC22 (WHICH MAY NOT BE THE SAME AS IC16 IN THE LATER P5 PRINTERS, AND IN THE P6 PRINTER)

FEATURES

- **Printing paper** — Can use fanfold paper 4–10 inches wide.
- **Character printing** — Four character sizes are possible.
- **Bit image printing** — Printing is possible with dot units.
- **Paging** — Number of lines printed on 1 page can be determined.
- **Tabulation** — Both vertical and horizontal tabulation control is possible.
- **Feed** — Switch for line by line paper feed and paper feed in page units. Control is also possible through software.
- **Copies** — Simultaneous copies, up to 3 pages in cluding the original, are possible.
- **Alarm bell** — Alarm bell sounds to warn the user of mechanical trouble, lack of printing paper, etc.
- **Bi-directional printing** — Along with bi-directional printing, there is very effective printing thanks to the use of logical seeking. (Only 80 characters/line, 40 characters/line)
- **Printing ribbon** — It can be easily put in and taken out because a special cartridge ribbon is used.

SHARP CORPORATION

Contents

SPECIFICATIONS

■ General

Item	Specification
Printing method	Impact dot matrix
Feed methos	Variable sprocket feed
Kinds of characters	230 kinds (95 ASCII characters +95 reverse characters of the 95 ASCII character +40 other characters
Character make-up	8(H) x 9(W) dot matrix (normal size character)
Line-to-line space	1/6 inch or determined by program
No. of digits	80 digits, 40 digits, 136 digits, 68 digits or determined by software
Page	66 lines/page (line space mode) or determined by program
Printing speed	80 cps (characters per second) (ordinary size characters)
Printing direction	Bi-direction (with logical seeking) for normal size character printing (80 characters/line) and its double size character printing (40 characters/line). For bit image printing and other printing; uni-direction (left to right).

Item	Specifications
Printing paper	Fanfold paper (4–10 inch wide)
Copies	Max. of 3 copies (including original)
Printing paper thickness	Within 0.3mm
Ink ribbon	Special cartridge ribbon
Head life	Approx. 50 million characters (14 dot character printing)
Standard interface	8 bit parallel interface (special for Sharp personal computer MZ-80B)
Power supply	AC 220V ±10% 50Hz AC 240V ±10% 50Hz (for UK)
Power consumption	75W
Working temperature	5 to 35°C
Storage temperature	–20 to 50°C
External dimensions	Approx. 377(W) x 318(D) x 105(H)mm
Weight	Approx. 6.4 kg

■ CPU Board Section

Item	Specifications
CPU	Z-80A
ROM	Program TMM 2732 (4K Bytes) Character TMM 2732 (4K Bytes)
RAM	TMM 314APL-1 (2114L-1) (1K Bytes)
I/O	TMM 8255AC
Counter	8253AC
Other IC's	22 pcs

■ Driver PWB Section

Item	Specifications
Timer IC	NE555
Head driver TR	2SD986 x 9
Step motor TR	2SD986 x 8
Others	Diodes, transistors

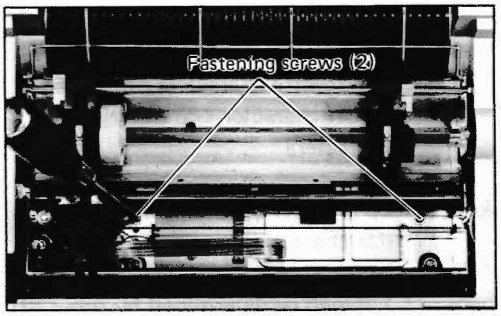
■ Power Supply Unit

Item	Specifications
Input	AC 220V ±10% 50Hz AC 240V ±10% 50Hz (for UK)
Output	DC 26V (21.5 to 26.5V) DC 15V DC 5V

NOTE Specifications and appearance are subject to change without prior notice for improvement. In such a case, the explanation here may be a little different from the product.

PRECAUTIONS BEFORE SERVICING

- The printer mechanism is fixed to the chassis with two screws to keep it from being damaged by vibration, etc. during transport. Remove these screws when using, maintaining or repairing the printer.
  Fix the mechanism again with these screws when transporting the printer.

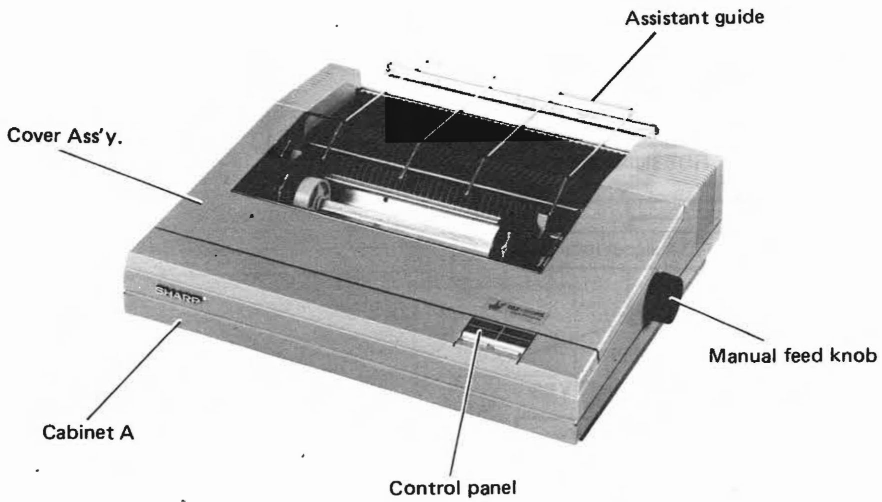


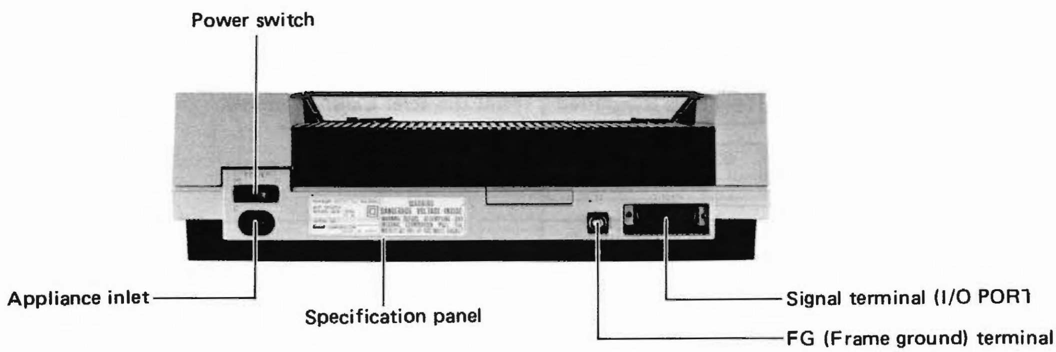
Remove the fastening screws

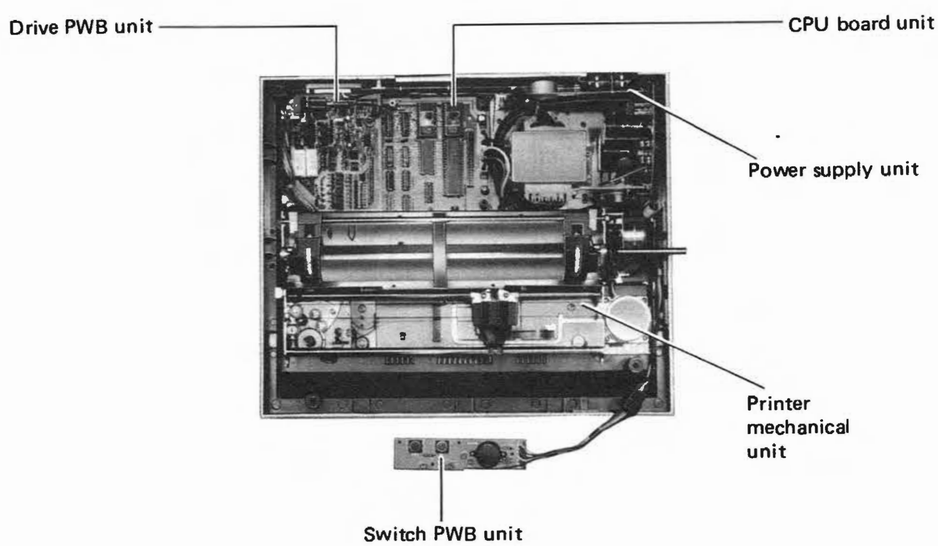
- Do not apply external force to the print head, such as by touching it when it is operating.
- The print head becomes very hot so do not touch it with your hand until it cools down sufficiently.
- Do not turn the paper feeding knob (manual feed knob) when the power is on or you will damage the paper feeding mechanism.
- Do not print when the ink ribbon is loose.
- When servicing and checking a printer that has been used for a long time, remove dirt, fuzz and dust from the inside, and oil the mechanism.
- There are two types of oil, G2 and O2. Use the proper oil for each oil point. (Refer to page 39, 40 for oil points.)
- There are screws and nuts which are fixed and then locked with paint for vibration-proof etc. during transport. Paint the screws to lock them after disassembling and replacing new parts. (Refer to page 39, 40 for the points to be painted to lock the screws.)

MZ-80P5 NAMES OF PARTS AND EXPLANATION OF FUNCTIONS

■ Names of parts

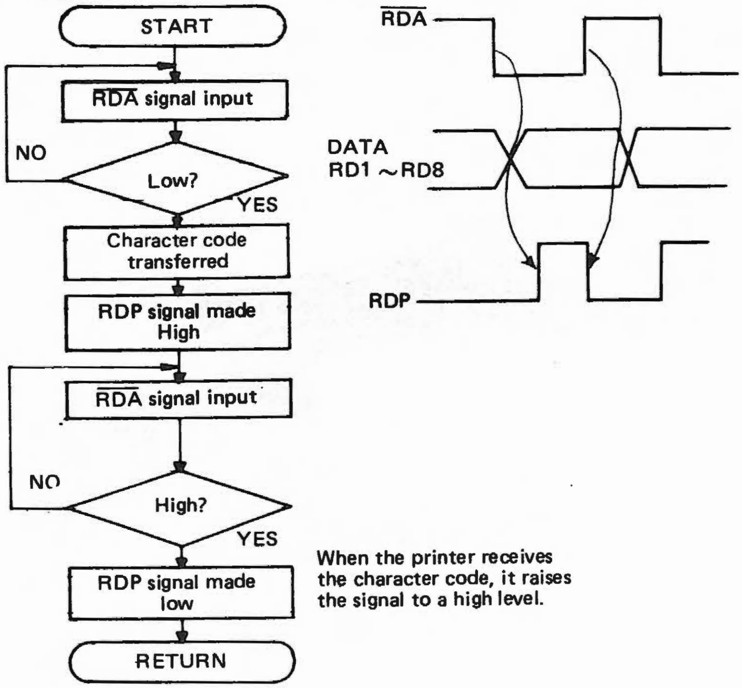




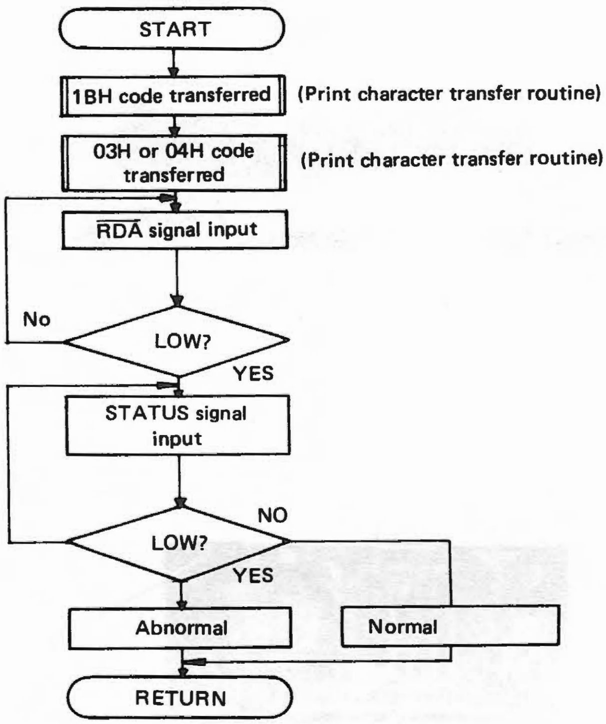


■ Printer Control Flow

• Print Character Transfer Flow



• Status Check Flow



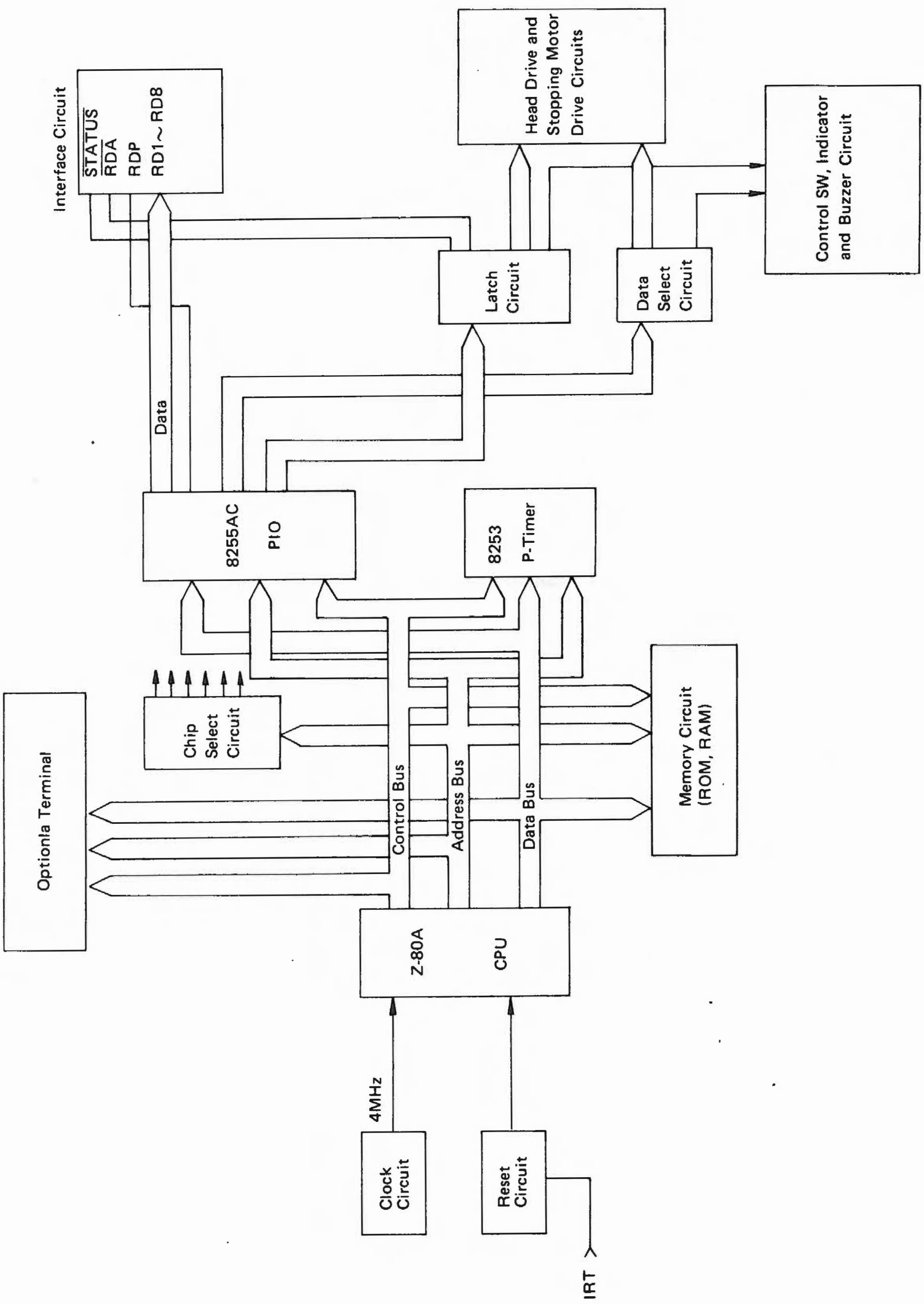
• Explanation of Signal

RDA. . . . . The printer outputs this signal under the following conditions. (Negative logic)
1) When the power is ON.
2) When the printer is READY.

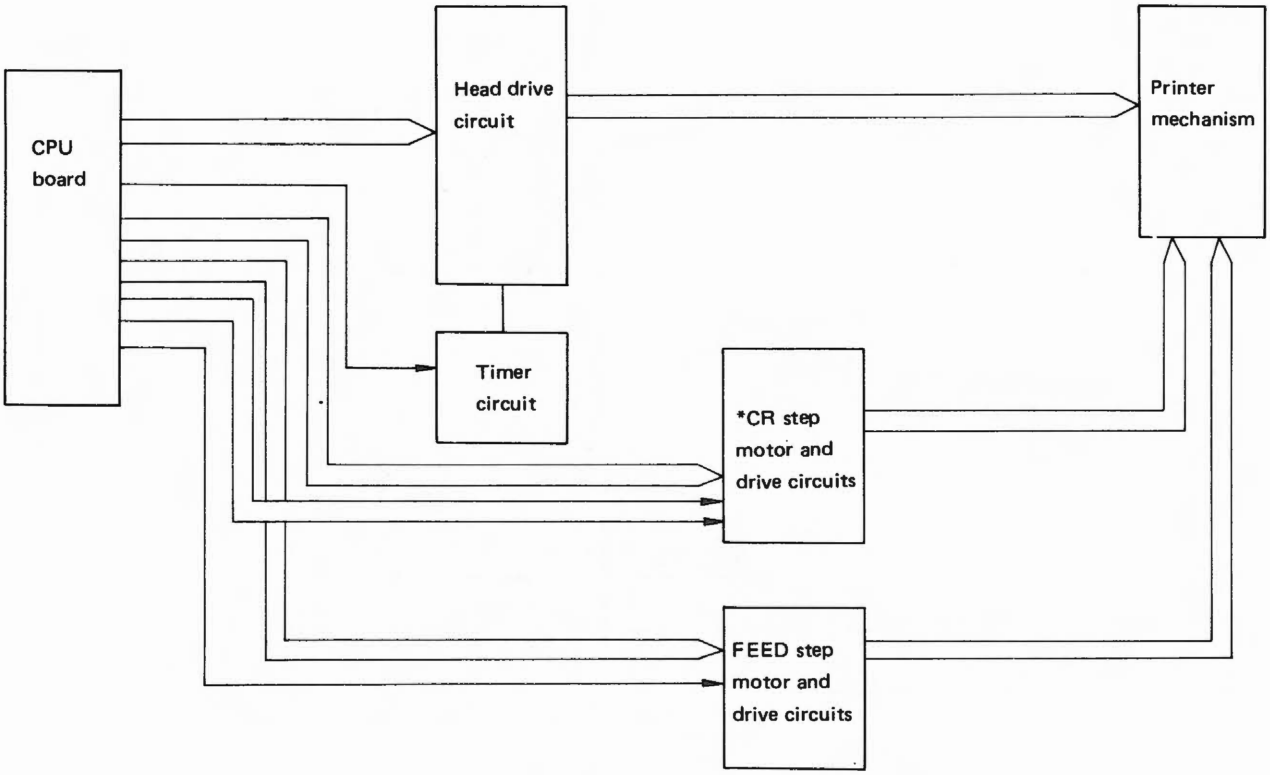
RDP. . . . . Outputs from the controller to the printer. (Positive logic)
Data (RD1 ~ RD8) strobe

STATUS . . . . Responds in the following conditions according to STATUS demands from the controller. (Negative logic)
1) PAPER EMPTY (1BH + 03H)
2) Printer machanical trouble (1BH + 04H)

■ **CPU Board Block Diagram**

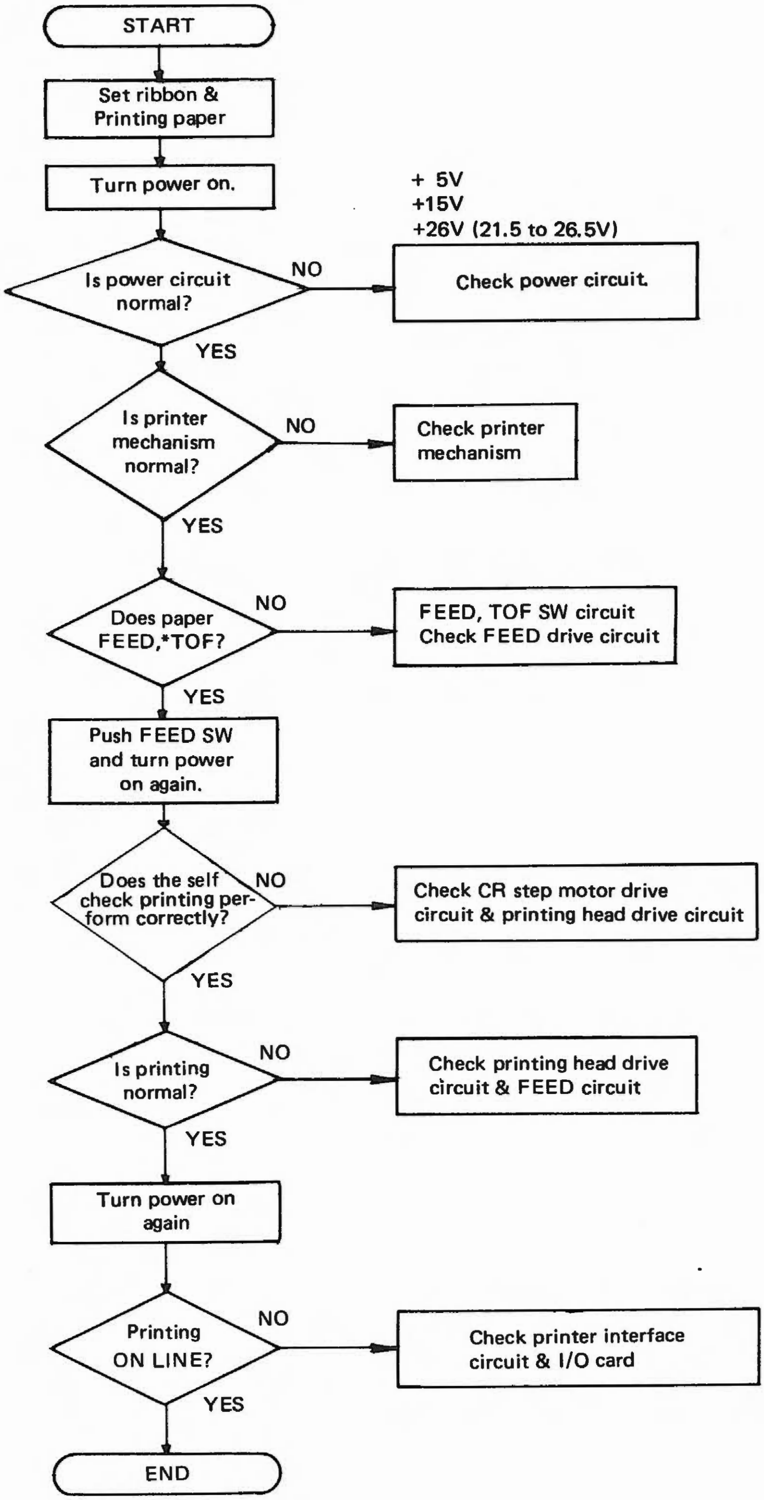


■ Driver Board Block Diagram

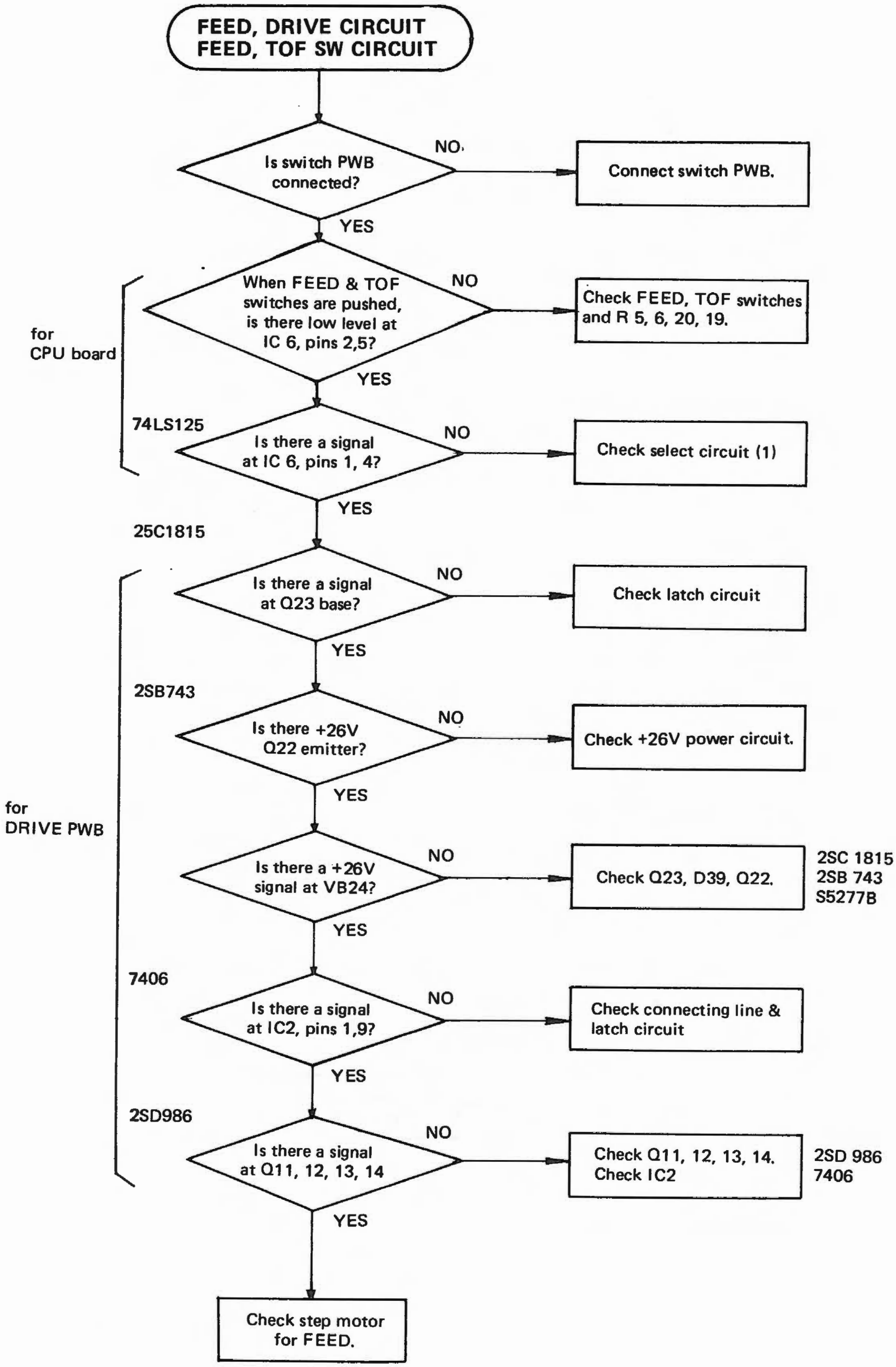


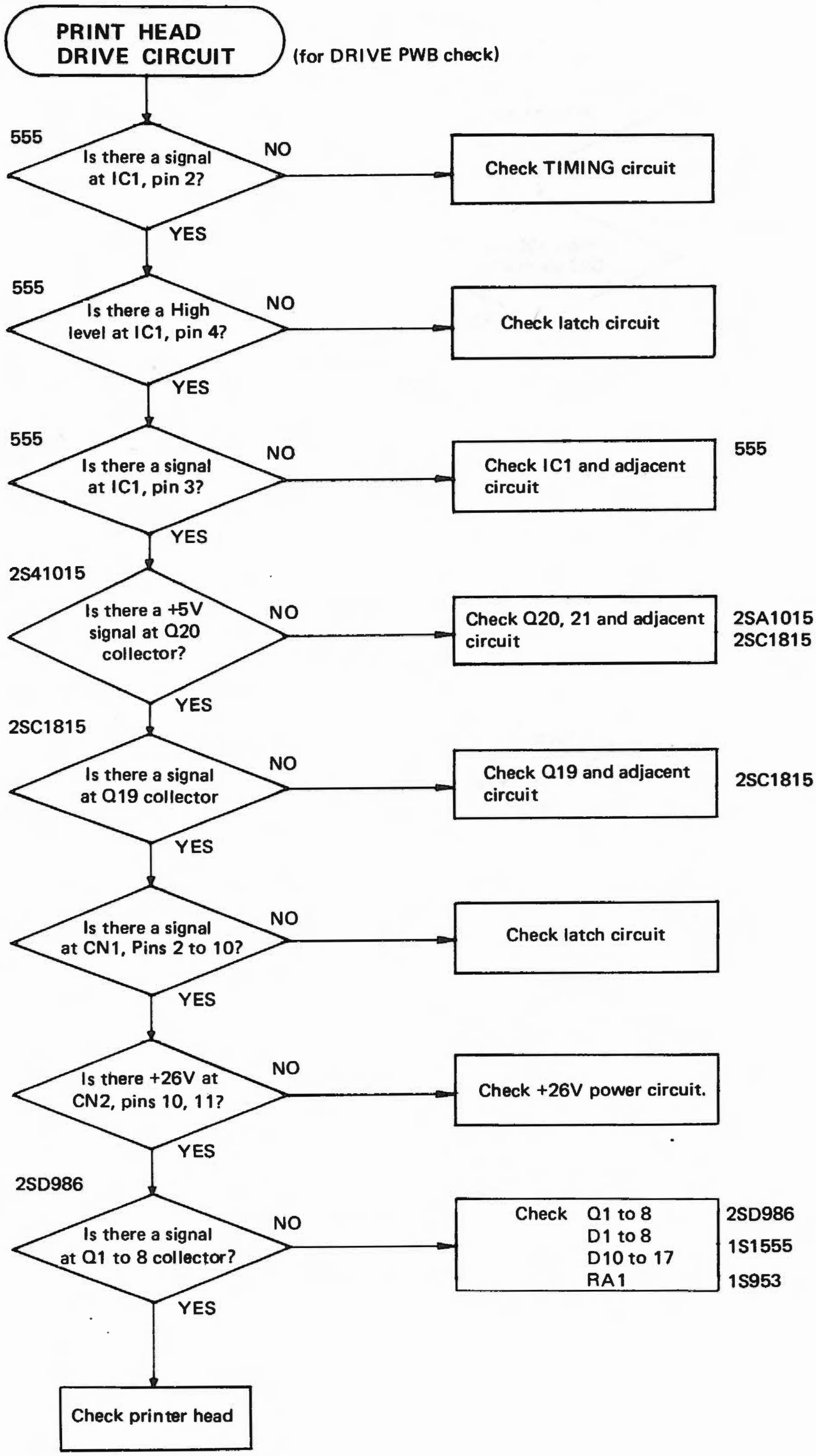
* CR Step motor = Carriage driving step motor = Timing belt motor

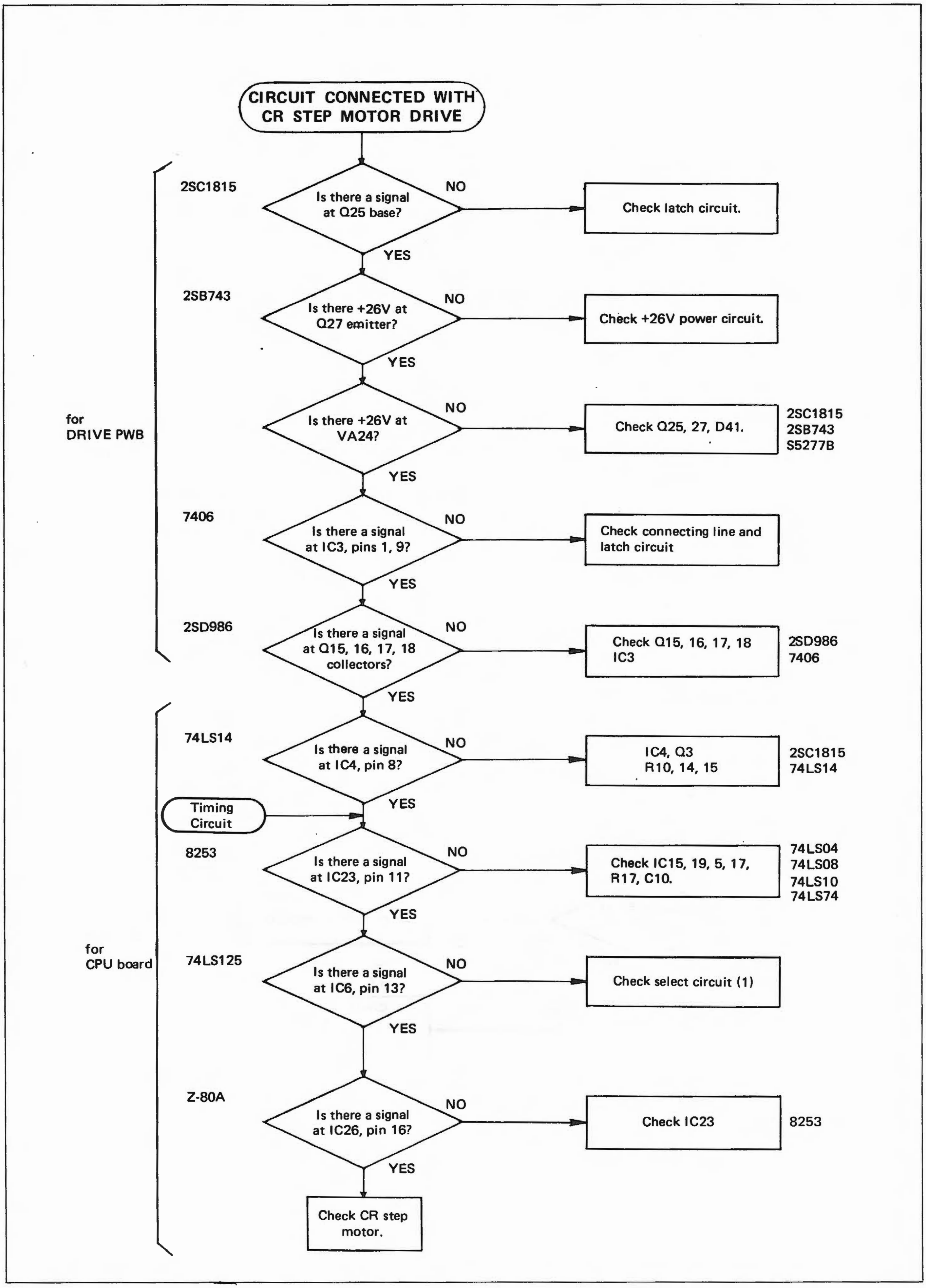
TROUBLESHOOTING CPU BOARD & DRIVE PWB

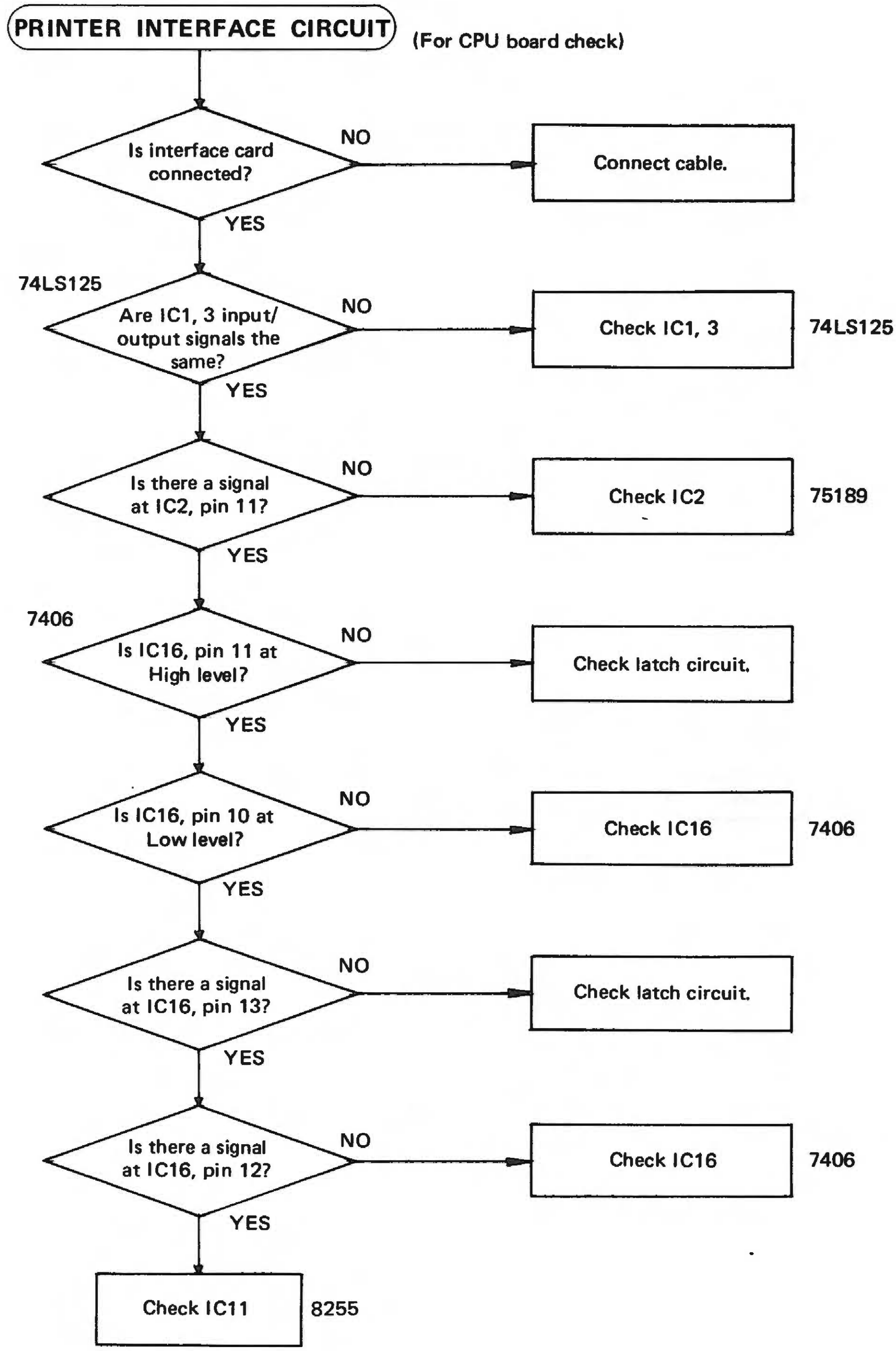


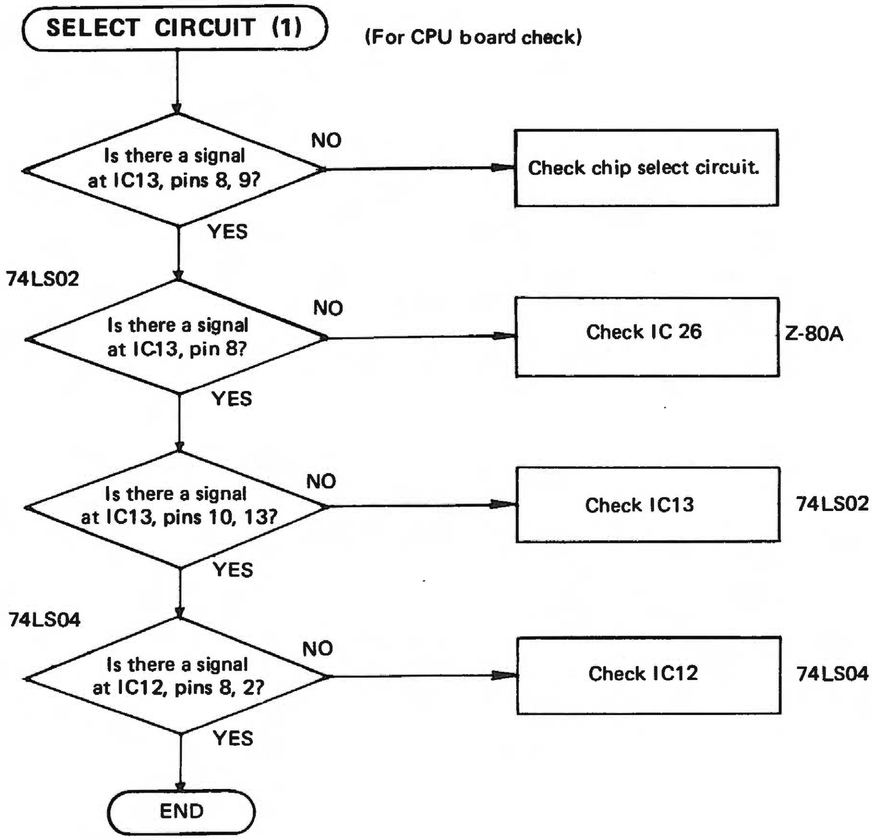
*TOF: Top of Form

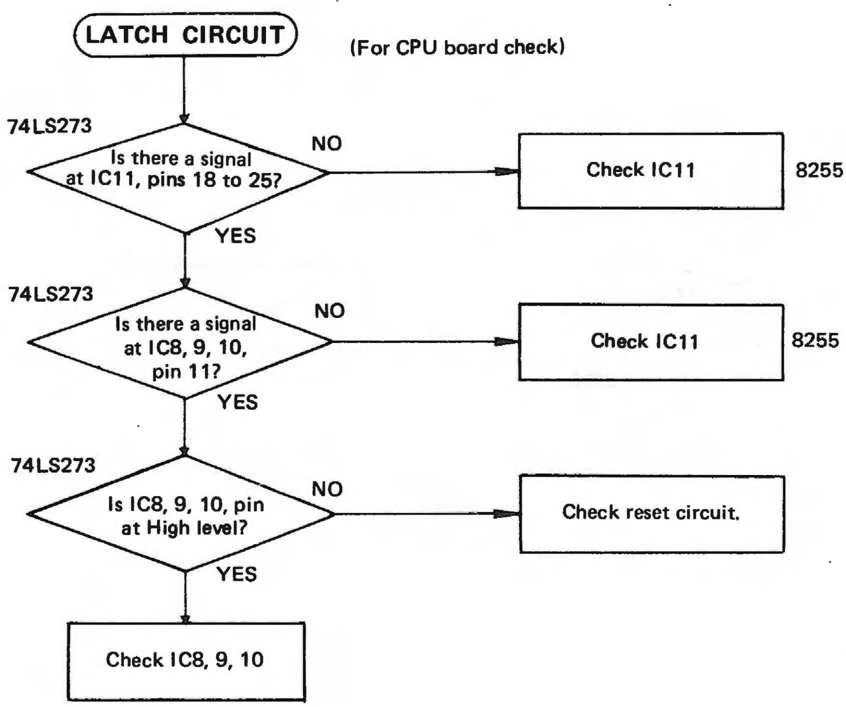

FEED, DRIVE CIRCUIT
FEED, TOF SW CIRCUIT
Is switch PWB connected?
NO
Connect switch PWB.
YES
When FEED & TOF switches are pushed, is there low level at IC 6, pins 2,5?
NO
Check FEED, TOF switches and R 5, 6, 20, 19.
YES
for CPU board
74LS125
Is there a signal at IC 6, pins 1, 4?
NO
Check select circuit (1)
YES
25C1815
Is there a signal at Q23 base?
NO
Check latch circuit
YES
2SB743
Is there +26V Q22 emitter?
NO
Check +26V power circuit.
YES
for DRIVE PWB
Is there a +26V signal at VB24?
NO
Check Q23, D39, Q22.
2SC 1815
2SB 743
S5277B
YES
7406
Is there a signal at IC2, pins 1,9?
NO
Check connecting line & latch circuit
YES
2SD986
Is there a signal at Q11, 12, 13, 14
NO
Check Q11, 12, 13, 14.
Check IC2
2SD 986
7406
YES
Check step motor for FEED.

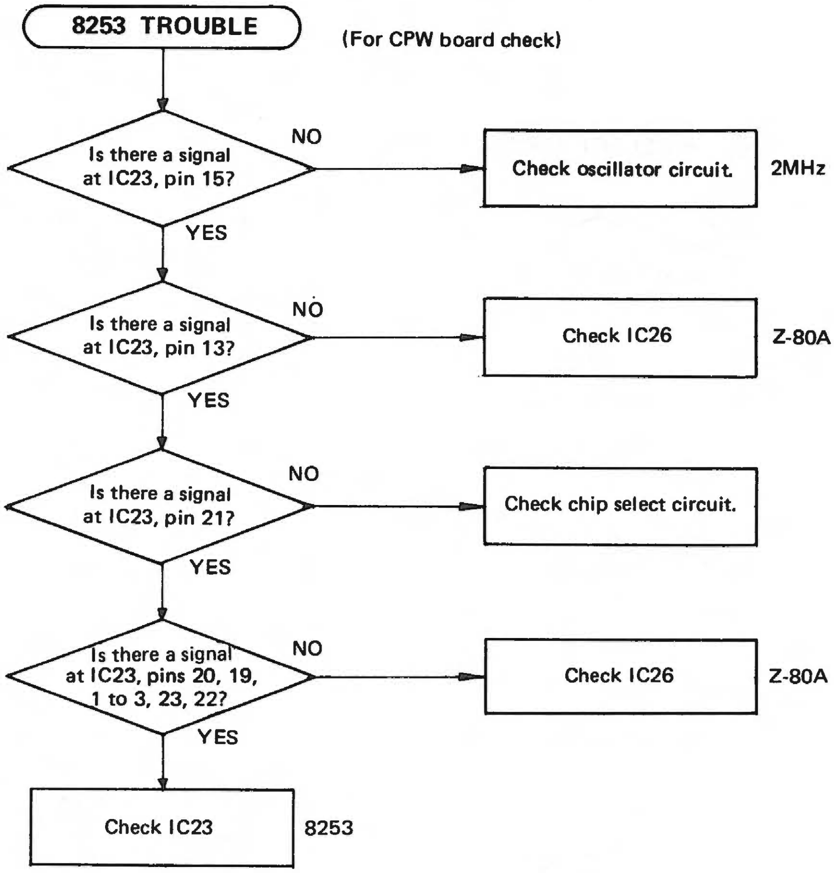

PRINT HEAD DRIVE CIRCUIT
(for DRIVE PWB check)
555
Is there a signal at IC1, pin 2?
NO
Check TIMING circuit
YES
555
Is there a High level at IC1, pin 4?
NO
Check latch circuit
YES
555
Is there a signal at IC1, pin 3?
NO
Check IC1 and adjacent circuit
555
YES
2S41015
Is there a +5V signal at Q20 collector?
NO
Check Q20, 21 and adjacent circuit
2SA1015
2SC1815
YES
2SC1815
Is there a signal at Q19 collector
NO
Check Q19 and adjacent circuit
2SC1815
YES
Is there a signal at CN1, Pins 2 to 10?
NO
Check latch circuit
YES
Is there +26V at CN2, pins 10, 11?
NO
Check +26V power circuit.
YES
2SD986
Is there a signal at Q1 to 8 collector?
NO
Check Q1 to 8
D1 to 8
D10 to 17
RA1
2SD986
1S1555
1S953
YES
Check printer head

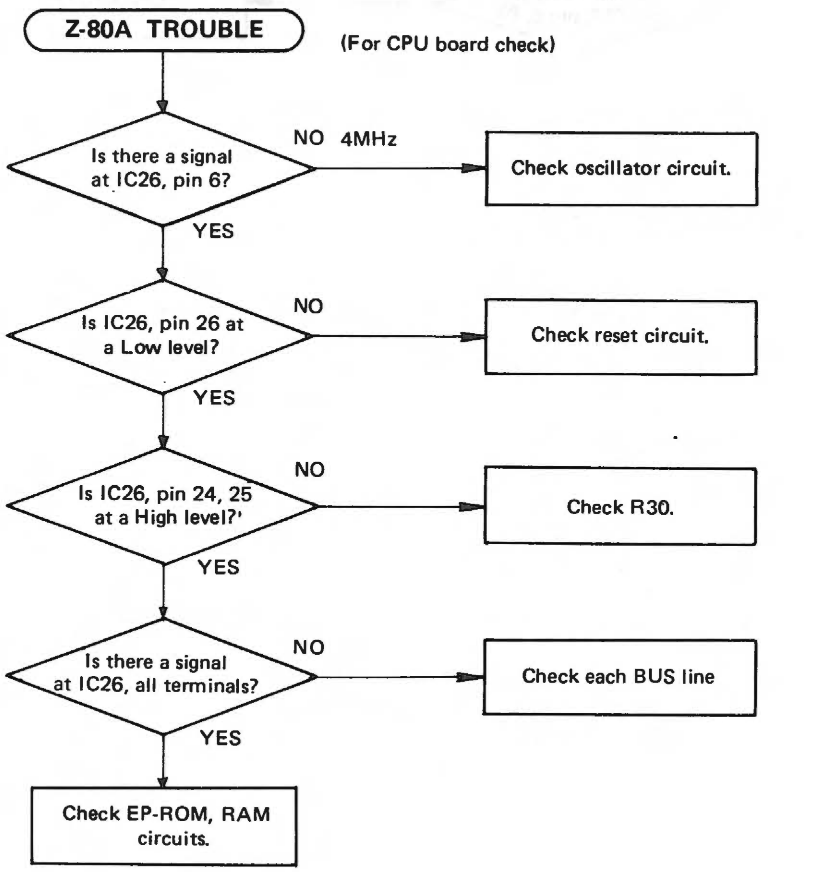

CIRCUIT CONNECTED WITH CR STEP MOTOR DRIVE
for DRIVE PWB
2SC1815
Is there a signal at Q25 base?
NO
Check latch circuit.
YES
2SB743
Is there +26V at Q27 emitter?
NO
Check +26V power circuit.
YES
Is there +26V at VA24?
NO
Check Q25, 27, D41.
2SC1815
2SB743
S5277B
YES
7406
Is there a signal at IC3, pins 1, 9?
NO
Check connecting line and latch circuit
YES
2SD986
Is there a signal at Q15, 16, 17, 18 collectors?
NO
Check Q15, 16, 17, 18 IC3
2SD986
7406
YES
for CPU board
74LS14
Is there a signal at IC4, pin 8?
NO
IC4, Q3
R10, 14, 15
2SC1815
74LS14
YES
Timing Circuit
8253
Is there a signal at IC23, pin 11?
NO
Check IC15, 19, 5, 17, R17, C10.
74LS04
74LS08
74LS10
74LS74
YES
74LS125
Is there a signal at IC6, pin 13?
NO
Check select circuit (1)
YES
Z-80A
Is there a signal at IC26, pin 16?
NO
Check IC23
8253
YES
Check CR step motor.

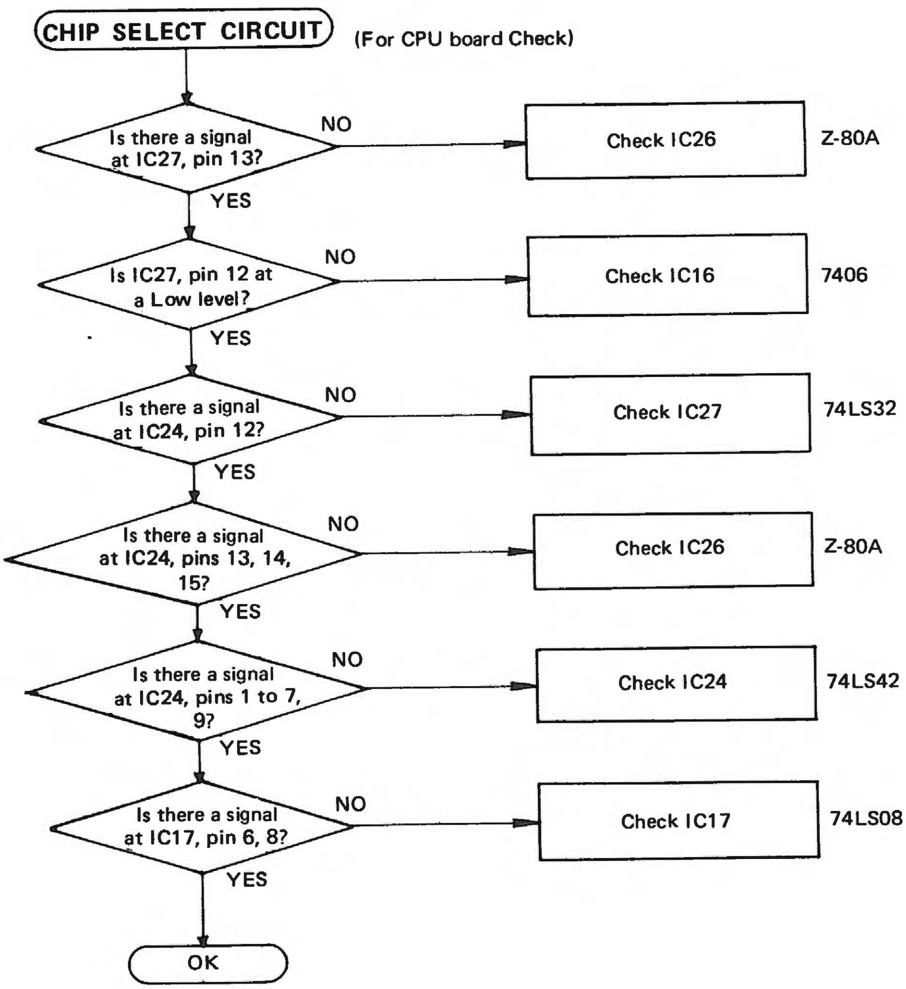

PRINTER INTERFACE CIRCUIT
(For CPU board check)
Is interface card connected?
NO
Connect cable.
YES
74LS125
Are IC1, 3 input/ output signals the same?
NO
Check IC1, 3
74LS125
YES
Is there a signal at IC2, pin 11?
NO
Check IC2
75189
YES
7406
Is IC16, pin 11 at High level?
NO
Check latch circuit.
YES
Is IC16, pin 10 at Low level?
NO
Check IC16
7406
YES
Is there a signal at IC16, pin 13?
NO
Check latch circuit.
YES
Is there a signal at IC16, pin 12?
NO
Check IC16
7406
YES
Check IC11
8255

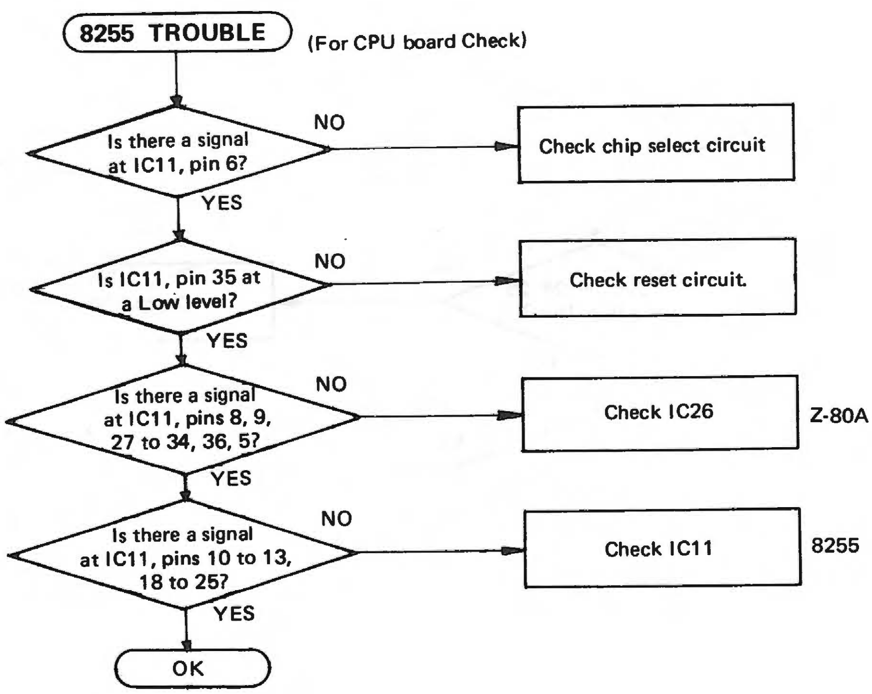

SELECT CIRCUIT (1)
(For CPU board check)
Is there a signal at IC13, pins 8, 9?
NO
Check chip select circuit.
YES
74LS02
Is there a signal at IC13, pin 8?
NO
Check IC 26
Z-80A
YES
Is there a signal at IC13, pins 10, 13?
NO
Check IC13
74LS02
YES
74LS04
Is there a signal at IC12, pins 8, 2?
NO
Check IC12
74LS04
YES
END

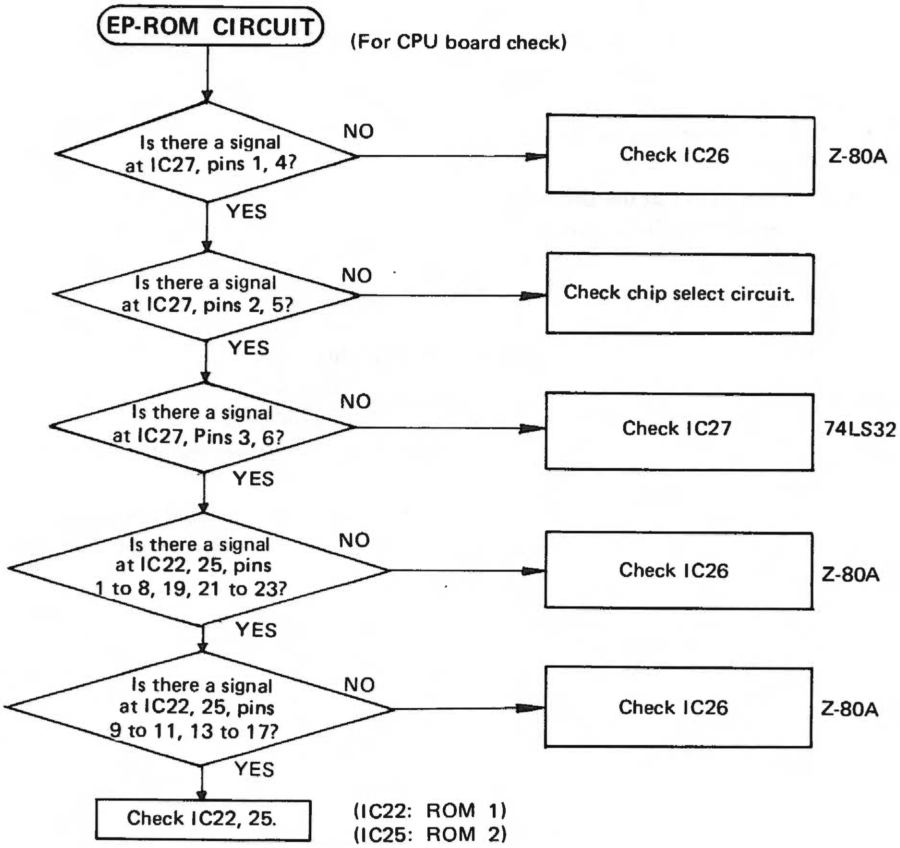

LATCH CIRCUIT
(For CPU board check)
74LS273
Is there a signal at IC11, pins 18 to 25?
NO
Check IC11
8255
YES
74LS273
Is there a signal at IC8, 9, 10, pin 11?
NO
Check IC11
8255
YES
74LS273
Is IC8, 9, 10, pin at High level?
NO
Check reset circuit.
YES
Check IC8, 9, 10

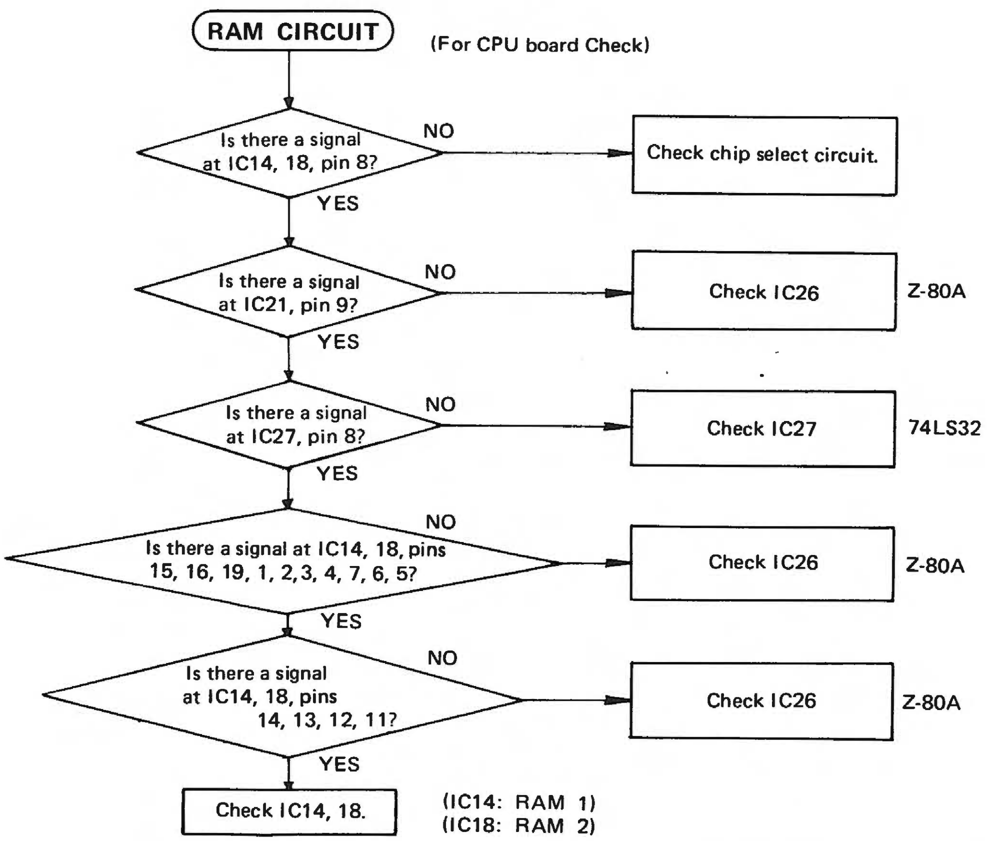

8253 TROUBLE
(For CPW board check)
Is there a signal at IC23, pin 15?
NO
Check oscillator circuit.
2MHz
YES
Is there a signal at IC23, pin 13?
NO
Check IC26
Z-80A
YES
Is there a signal at IC23, pin 21?
NO
Check chip select circuit.
YES
Is there a signal at IC23, pins 20, 19, 1 to 3, 23, 22?
NO
Check IC26
Z-80A
YES
Check IC23
8253


Z-80A TROUBLE
(For CPU board check)
Is there a signal at IC26, pin 6?
NO 4MHz
Check oscillator circuit.
YES
Is IC26, pin 26 at a Low level?
NO
Check reset circuit.
YES
Is IC26, pin 24, 25 at a High level?
NO
Check R30.
YES
Is there a signal at IC26, all terminals?
NO
Check each BUS line
YES
Check EP-ROM, RAM circuits.


CHIP SELECT CIRCUIT
(For CPU board Check)
Is there a signal at IC27, pin 13?
NO
Check IC26
Z-80A
YES
Is IC27, pin 12 at a Low level?
NO
Check IC16
7406
YES
Is there a signal at IC24, pin 12?
NO
Check IC27
74LS32
YES
Is there a signal at IC24, pins 13, 14, 15?
NO
Check IC26
Z-80A
YES
Is there a signal at IC24, pins 1 to 7, 9?
NO
Check IC24
74LS42
YES
Is there a signal at IC17, pin 6, 8?
NO
Check IC17
74LS08
YES
OK


8255 TROUBLE
(For CPU board Check)
Is there a signal at IC11, pin 6?
NO
Check chip select circuit
YES
Is IC11, pin 35 at a Low level?
NO
Check reset circuit.
YES
Is there a signal at IC11, pins 8, 9, 27 to 34, 36, 5?
NO
Check IC26
Z-80A
YES
Is there a signal at IC11, pins 10 to 13, 18 to 25?
NO
Check IC11
8255
YES
OK


EP-ROM CIRCUIT
(For CPU board check)
Is there a signal at IC27, pins 1, 4?
NO
Check IC26
Z-80A
YES
Is there a signal at IC27, pins 2, 5?
NO
Check chip select circuit.
YES
Is there a signal at IC27, Pins 3, 6?
NO
Check IC27
74LS32
YES
Is there a signal at IC22, 25, pins 1 to 8, 19, 21 to 23?
NO
Check IC26
Z-80A
YES
Is there a signal at IC22, 25, pins 9 to 11, 13 to 17?
NO
Check IC26
Z-80A
YES
Check IC22, 25.
(IC22: ROM 1)
(IC25: ROM 2)


RAM CIRCUIT
(For CPU board Check)
Is there a signal at IC14, 18, pin 8?
NO
Check chip select circuit.
YES
Is there a signal at IC21, pin 9?
NO
Check IC26
Z-80A
YES
Is there a signal at IC27, pin 8?
NO
Check IC27
74LS32
YES
Is there a signal at IC14, 18, pins 15, 16, 19, 1, 2, 3, 4, 7, 6, 5?
NO
Check IC26
Z-80A
YES
Is there a signal at IC14, 18, pins 14, 13, 12, 11?
NO
Check IC26
Z-80A
YES
Check IC14, 18.
(IC14: RAM 1)
(IC18: RAM 2)

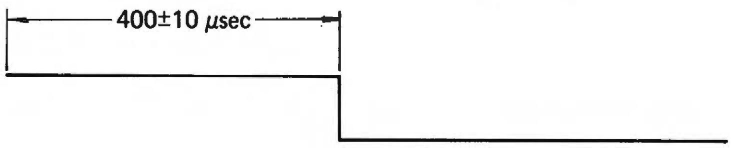
ADJUSTMENT OF HEAD DRIVING COIL ENERGIZING PULSE WIDTH

This concerns the printing energy force for the head wire to print a dot and its length in time as well. The shorter the energizing pulse width (time) is, the smaller the printing energy is, thus weakening printed letters. To the contrary, the larger pulse width prolongs the printing time of head wire, thereby feeding the head with the head wire clacking out. In most cases, the head wire is caught by the ink ribbon, and what is worse, the tip of head wire is broken.

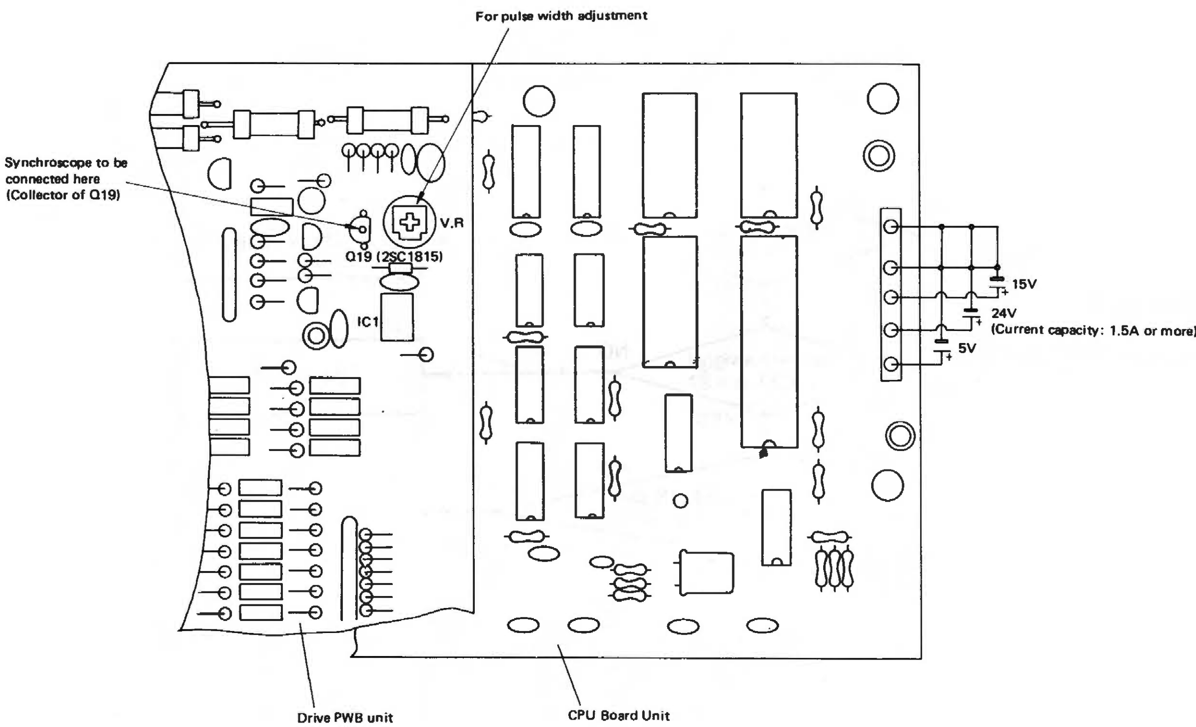
This adjustment is required to give an appropriate printing energy to the head wire. Make an adjustment in the following manner.

1) Remove cabinet B. (Do not disconnect the connector of feed switch circuit.)
2) Take out the head cord PWB connector from the connector of terminal PWB. Be careful not to damage the head cord PWB.
3) Turn on the paper end sensor. (Put a piece of paper in the paper sensor lever located at printing paper insertion area.)
4) Draw out the power supply socket (N0504) with 5-pin lead from the CPU board.
5) Connect 3 units of D.C. power supply to the 5-pin connector (N0504) of CPU board as shown below: 24V D.C. (current capacity: 1.5A or more), 15V D.C. and 5V D.C..
6) While pushing the line feed switch of the set, turn on the power switches of the three D.C. power supply units. (The head is shifted right and left.)
7) Connect the synchroscope to the collector of the transistor Q19 (2SC1815) on the drive PWB to check to see if the pulse width on the synchroscope is 400±10 μsec. If the width is out of standard value, rotate the semi-variable resistor at the drive PWB to adjust the width.
   (The semi-variable resistor is to be fixed with lacquer after adjustment.)

Note: Before checking pulse width, calibrate the synchroscope to eliminate error in time base.



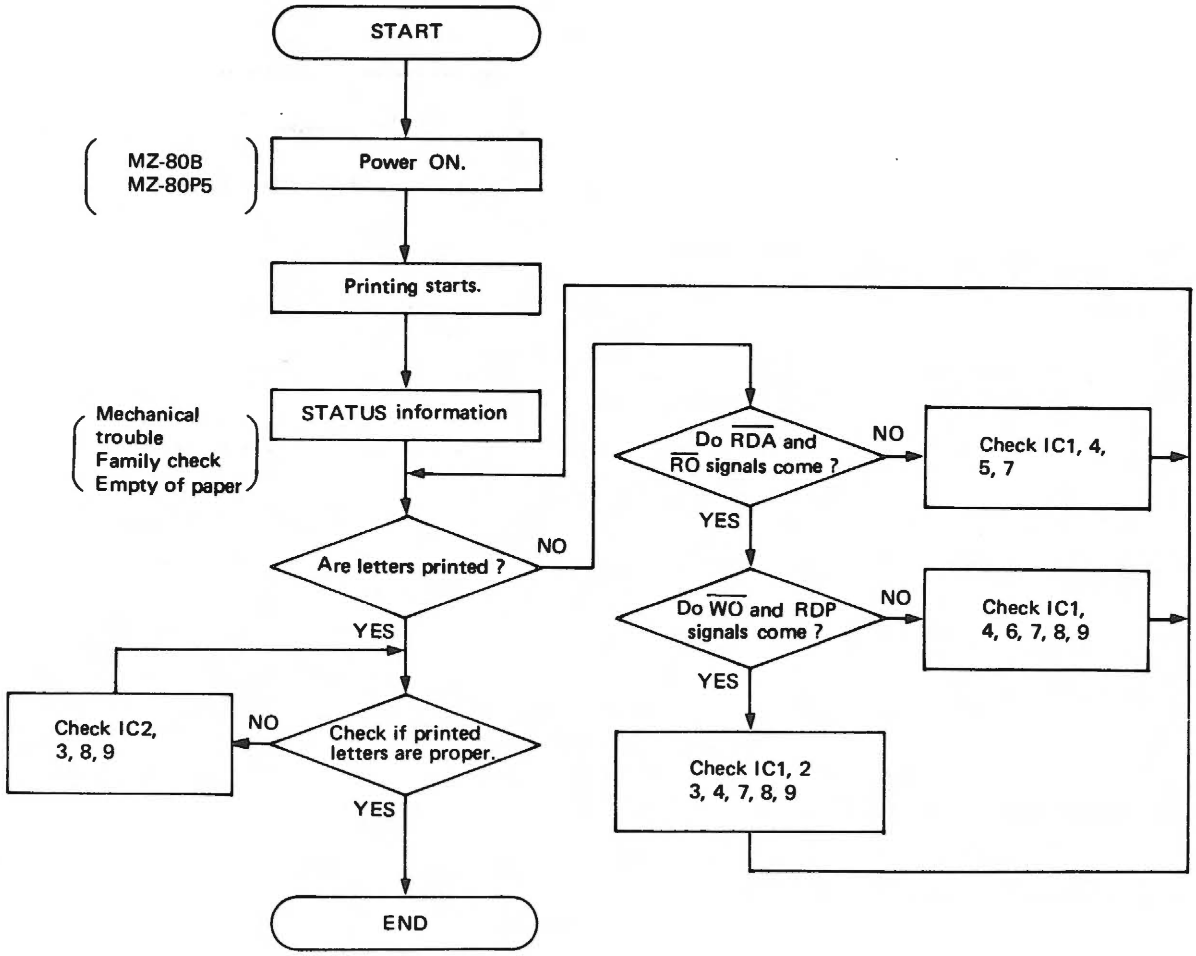
Head driving coil energizing pulse signal



Connecting diagram for power supply and synchroscope

I/O CARD REPAIR PROCEDURE

■ **Procedural steps**



■ **Checking method of printer interface circuit**

1) Press insulated part of IC with finger to check

- if it is abnormally heated . . . . IC improper, too large load in IC, touching between circuits
- if there is an unappropriate change . . . . faulty soldering, improper printed wiring

2) Use a synchroscope to check

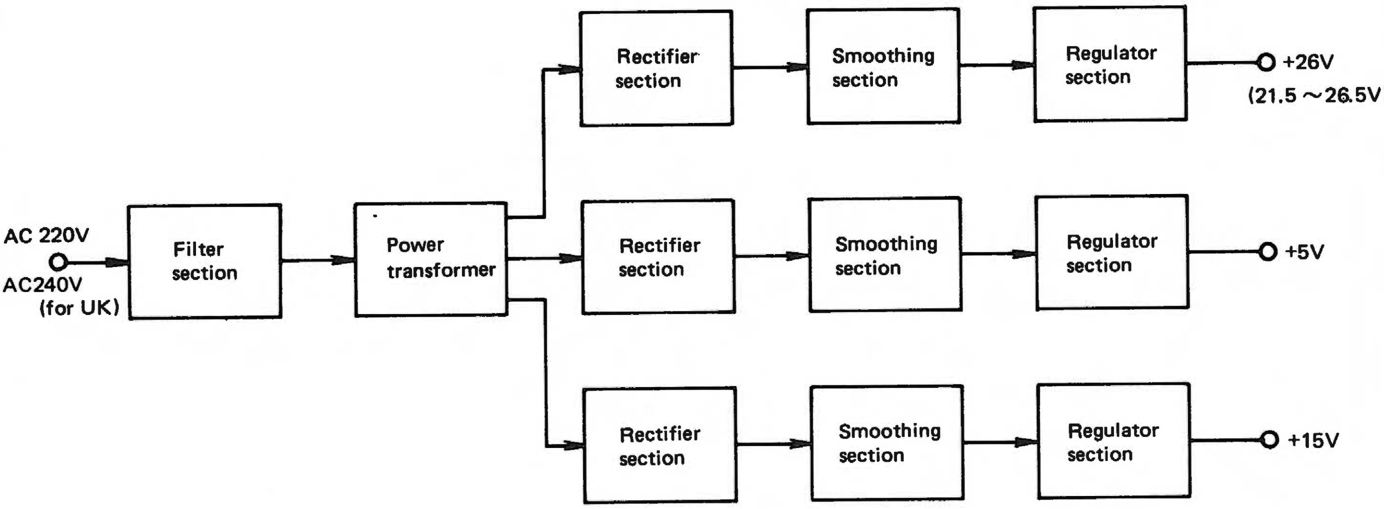
- if input and output logics of TTL-IC do not match . . . . . . Defective IC gate
- if TTL-IC voltages are within the TTL level

  Note) TTL level: High: 2.4V or more

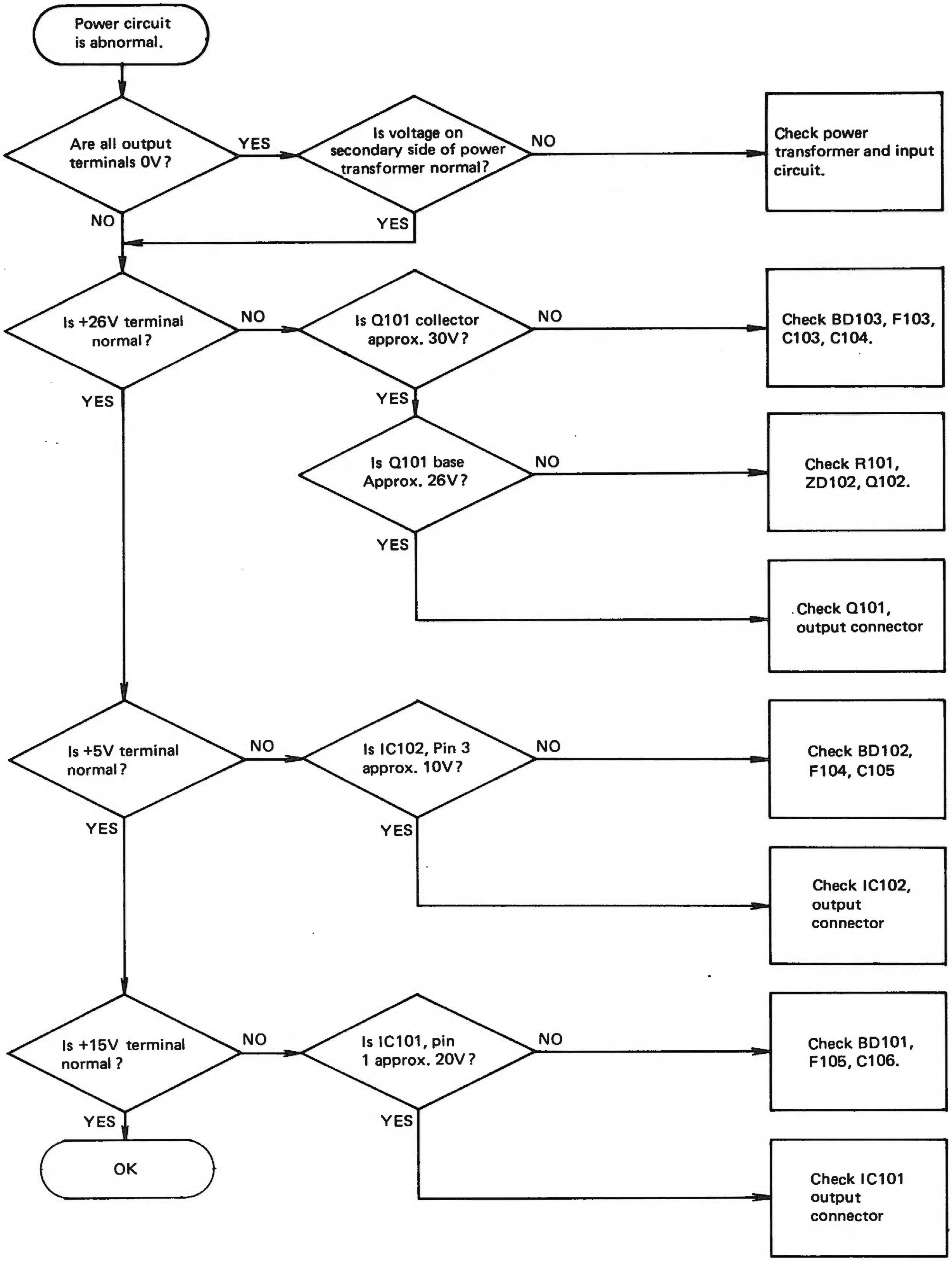
  Low: 0.5V or less

POWER SUPPLY SECTION

■ **Block Diagram of Power Supply Circuit**

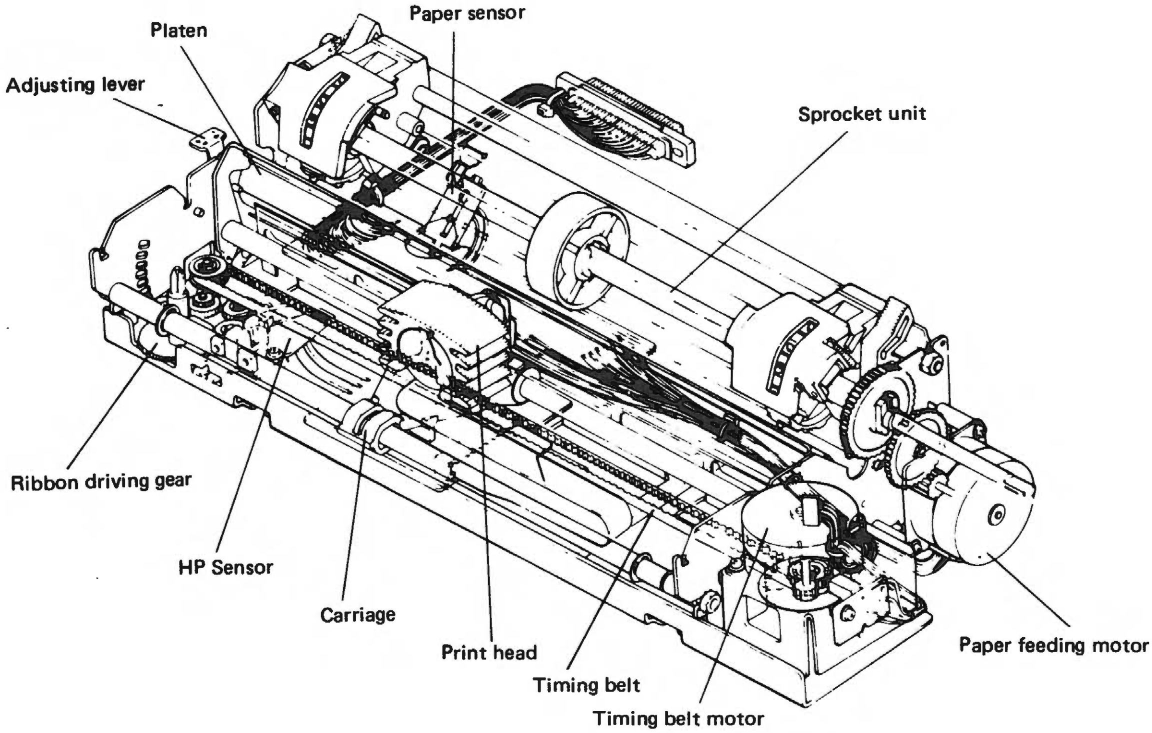


■ **Troubleshooting**



FUNCTIONS OF PRINTER PARTS

■ Exterior of Mechanism and Names of Parts



■ Sensing Mechanisms

Sensing mechanisms consist of HP sensor, PTS sensor and PE sensor. The HP sensor is attached to determine the Home Position of the carriage and generates the reference signal for printing.
The PTS sensor generates the timing signal used to determine printing position. It detects this signal and adjusts carriage speed. The PE sensor detects the presence or absence of paper.

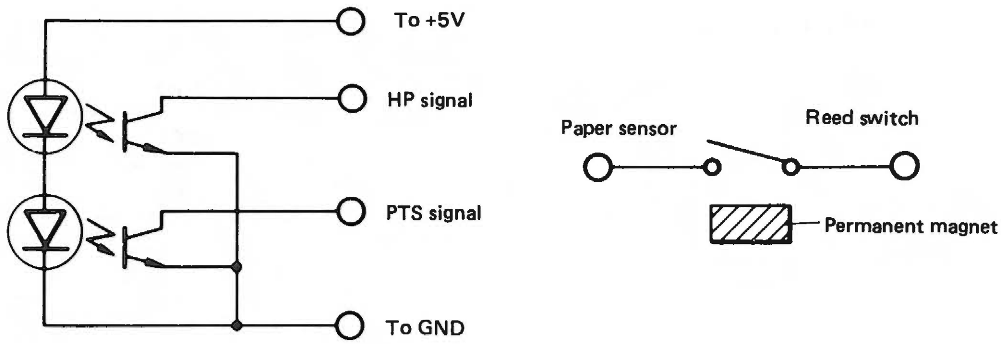
1. HP Sensor (Home Position Sensor)

The HP sensor consists of the home position sensor assembly and sensor board on the lower part of the carriage. The signal is High when the sensor board interrupts the light shaft of the photo coupler. It is an open collector output)

2. **PTS Sensor (Print Timing Signal Sensor)**
The PTS sensor consists of the PTS sensor board assembly and the sensor board on the timing belt motor shaft. The signal is Low when the slit of the sensor board appears. (It is an open collector output.)

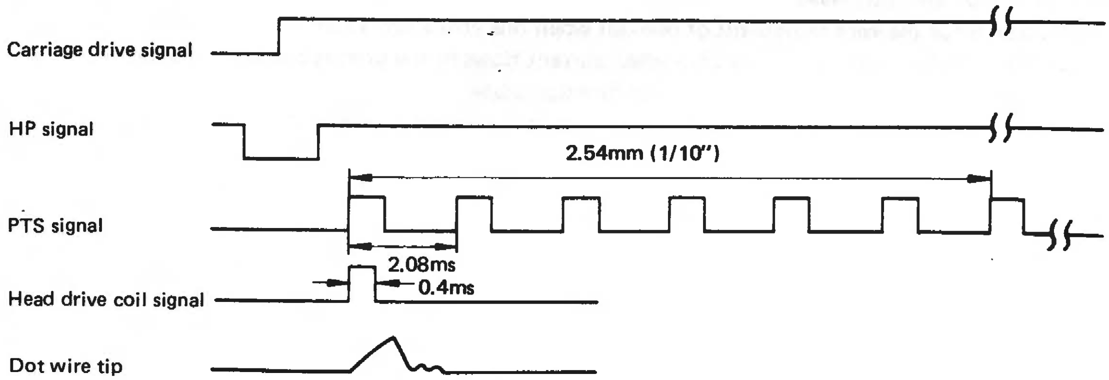
3. **Paper Sensor**
The paper sensor consists of the reed switch attached to paper sensor board and the permanent magnet attached to the paper sensor lever. The permanent magnet approaches the reed switch and the signal passes when there is no paper.

4. **Sensor Circuit**

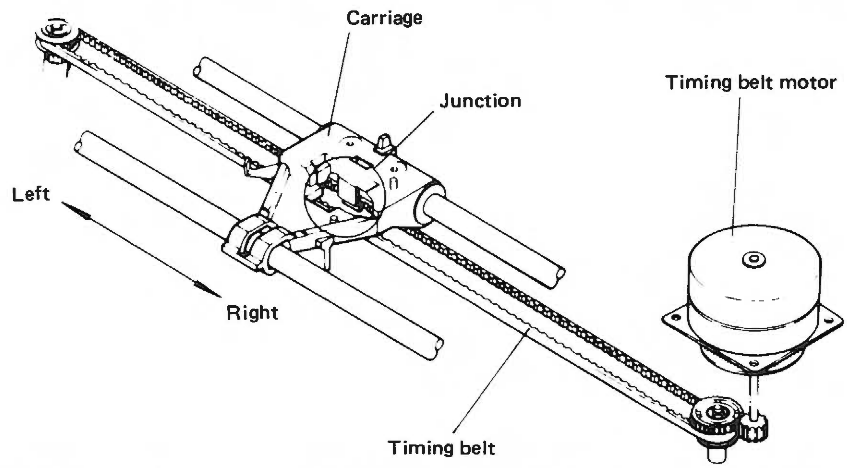


■ Printing Mechanism

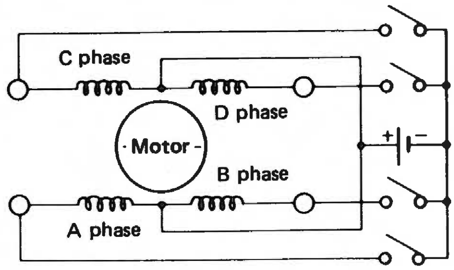
The main elements of the printing mechanism are print head unit, carriage, timing belt, timing belt motor and platen. The print head unit on the carriage is moved to the right and left by the timing belt on shafts A and B of the carriage guide. The timing belt is driven by the timing belt motor through the belt driving pulley and belt driving pulley.
Printing performs when the dot wire springs out toward the platen due to the flow of current in the head driving coil. The current flows when the PTS signal is generated by the belt motor rotation.



1. **Principle of Carriage Movement**
The carriage is moved to the right and left by the drive of the timing belt motor with the timing belt inserted in the carriage.



Drive for the timing belt motor is basically 2-2 phase excitation.



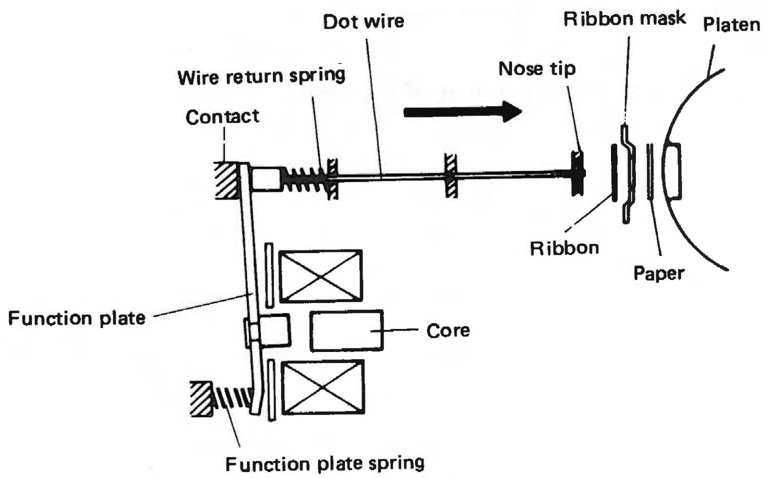
Sequence of the belt motor drive to move the carriage is as follows.

Carriage	Step	A phase	B phase	C phase	D phase
From left to right	1	ON	OFF	OFF	ON
	2	ON	OFF	ON	OFF
	3	OFF	ON	ON	OFF
	4	OFF	ON	OFF	ON
From right to left	1	ON	OFF	ON	OFF
	2	ON	OFF	OFF	ON
	3	OFF	ON	OFF	ON
	4	OFF	ON	ON	OFF

2. Printing function of the Print Head

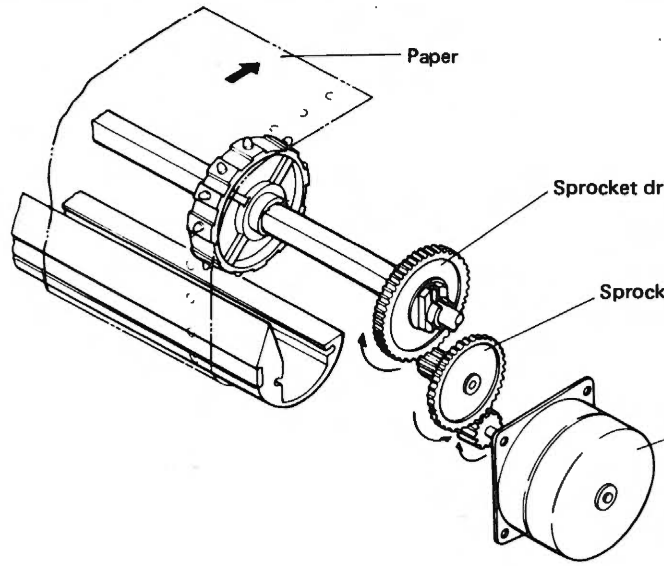
This explanation is for the wire movement of one dot when one character is formed.

1) The function plate is pulled in to the core when current flows in the driving coil and thus the dot wire springs toward the platen since it is connected with the function plate.
2) The forced dot wire springs out till it strikes the platen and one dot is printed on the paper through the ribbon when it strikes the platen.
3) The function plate is reset to its former position by the force of the function plate spring when current no longer passes through the driving coil.
   The dot wire, after it strikes the platen, returnes to its position, which is connected with function plate, by its striking force and the wire return spring and maintains itself in a waiting condition.



■ Paper Feeding Mechanism

The paper feeding mechanism has ordinary feed, fast feed. Paper is fed by the sprocket shaft using the sprocket transmission gear driven by the paper feeding motor and the sprocket driving gear. Paper is fed by pulling the paper up with the sprocket pins. The drive method for the paper feeding motor is the same as the carriage motor moves the carriage from right to left.
The printing position on the paper can be adjusted with a knob, but the adjustable minimum width is about 0.5mm because of the resolution precision of the pulse motor.

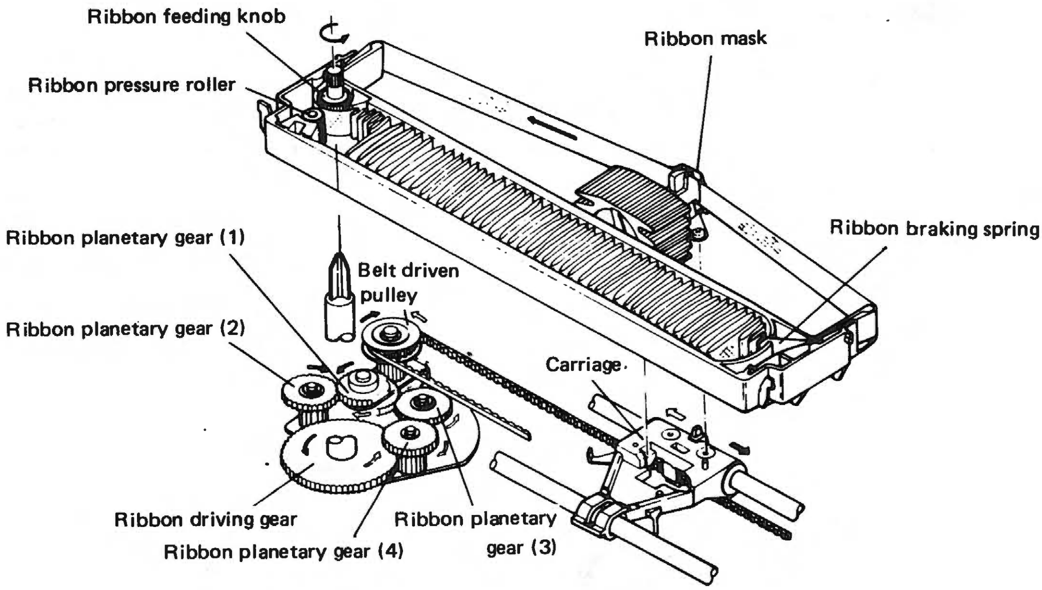


■ Ribbon Feeding Mechanism

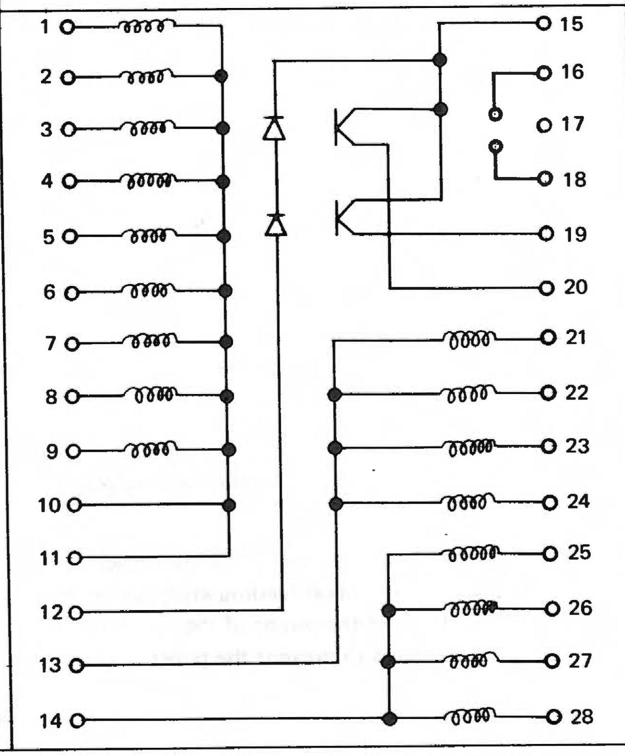
The ribbon mechanism consists of the cartridge ribbon and ribbon feeding mechanism. The ribbon feeding mechanism is attached to the belt tension plate assembly. Movement of the timing belt to the right and left is through the following arrangement of wheels. The ribbon driving gear normally turns counterclockwise.

	Carriage movement	Arrangement of wheels
1	Left → Right (In direction of arrow ➡)	• Belt driven pulley → Planetary pinion (1) → Planetary pinion (2) → Ribbon driving gear
2.	Right → Left (In direction of arrow ⇨)	• Belt driven pulley → Planetary pinion (1) → Planetary pinion (3) → Planetary pinion (4) → Ribbon driving gear

The ink ribbon is stored endlessly in the cartridge case. This ink ribbon, pinched between the ribbon feeding knob and ribbon pressure roller, is wound up by the ribbon feeding knob set on the ribbon driving gear.
Furthermore, there is a ribbon braking spring at the outlet of the cartridge case to prevent the ribbon from becoming loose as it is wound. A ribbon mask is attached to prevent the paper from becoming dirty.



■ Connector Diagram



Connection	Connector terminal No.	Connector terminal No.	Connection
Print solenoid 1	1	15	R, T sensor (GND)
〃 2	2	16	Paper sensor
〃 3	3	17	
〃 4	4	18	Paper sensor
〃 5	5	19	Timing signal
〃 6	6	20	Reset signal
〃 7	7	21	CR motor A phase
〃 8	8	22	" B "
〃 9	9	23	" C "
Print solenoid Common line (+)	10	24	" D "
〃	11	25	PF motor A phase
V_{LED} (+5V)	12	26	" B "
CR motor common line (+)	13	27	" C "
PF motor common line	14	28	" D "

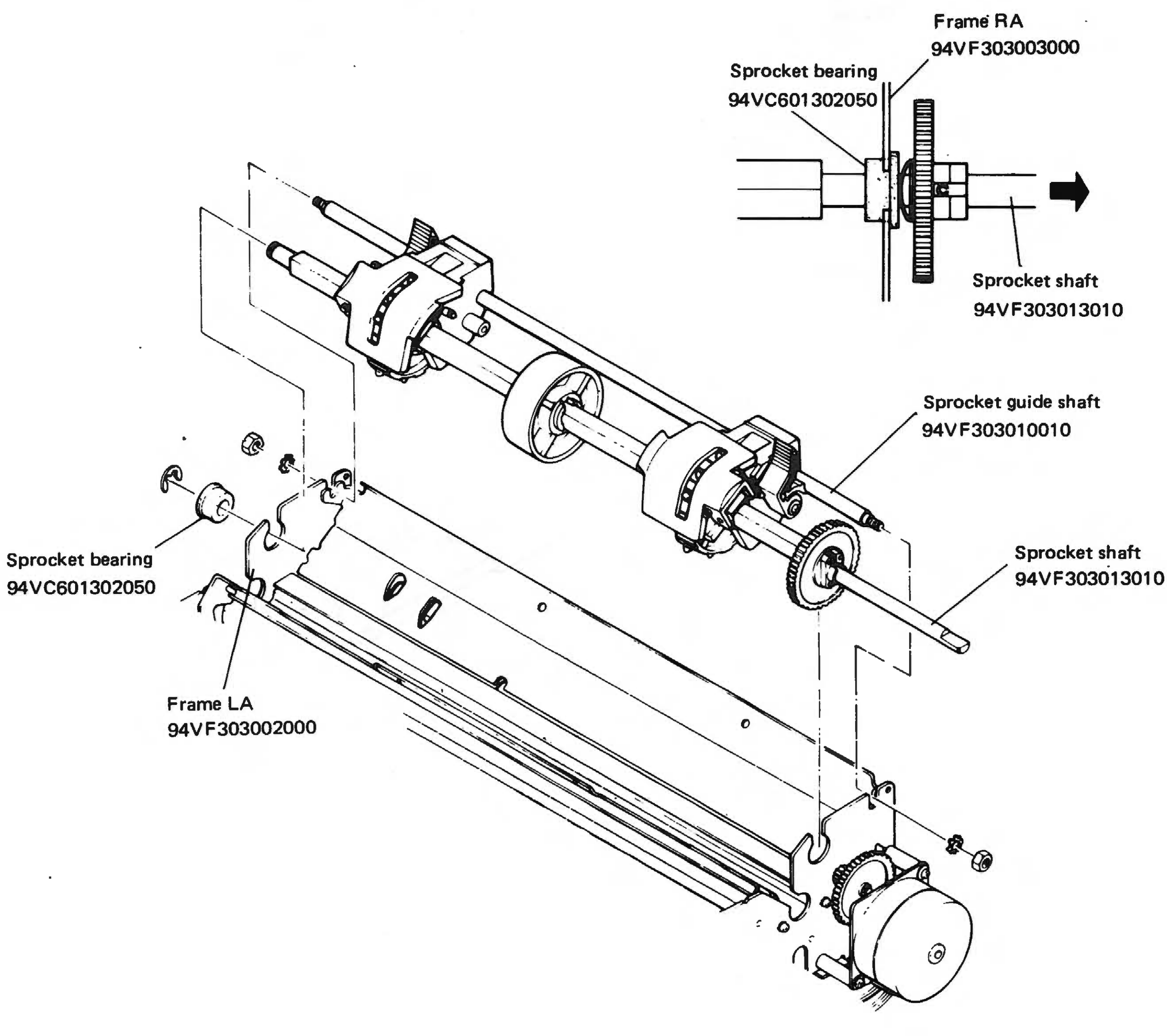
Note: Print solenoids are counted 1, 2. . . . . 9 from the upper side of the characters.

REPLACING OF MAIN PRINTER PARTS

1. Sprocket Unit

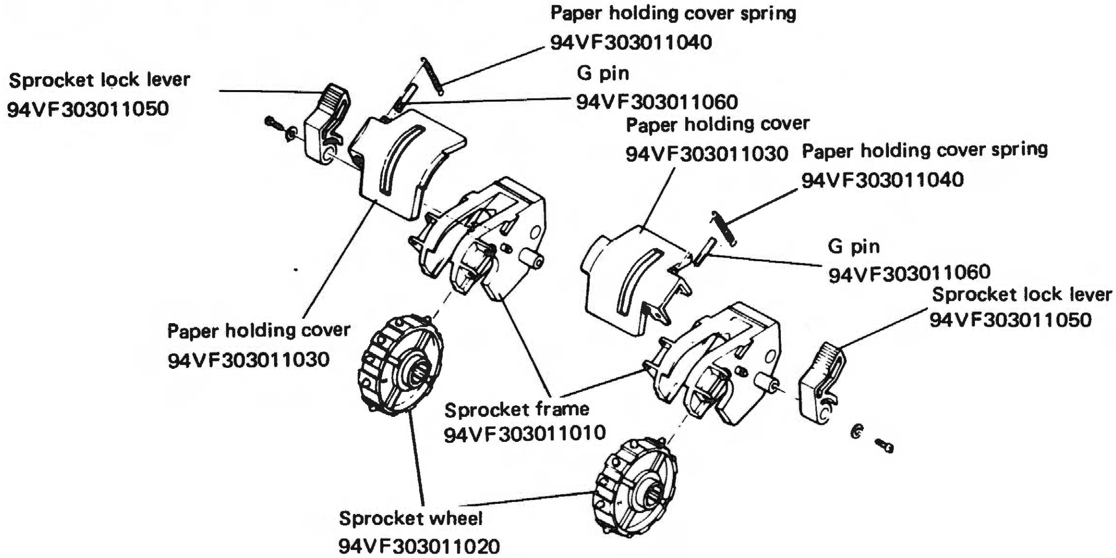
1-1 Disassembly

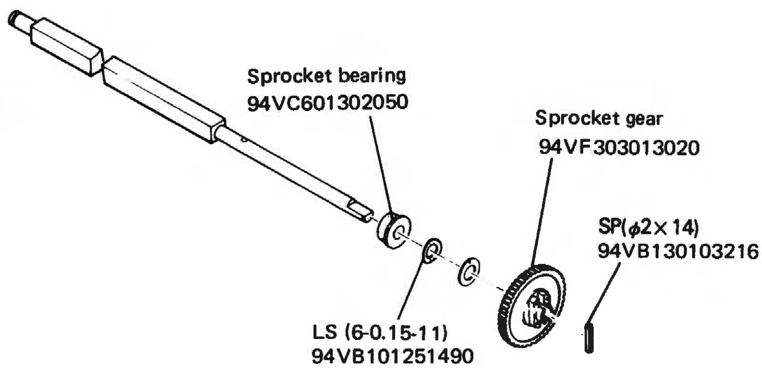
(1) Remove fastener for sprocket guide shaft. (4N x 2,4W x 2)
(2) Remove sprocket bearing from frame LA side of the sprocket shaft. (E ring)
(3) Remove the sprocket unit and disassemble.
 1) Pull the sprocket shaft in the direction of the arrow and remove the sprocket bearing from frame RA.
 2) Lift the sprocket unit up and out.



(4) Disassemble the sprocket unit

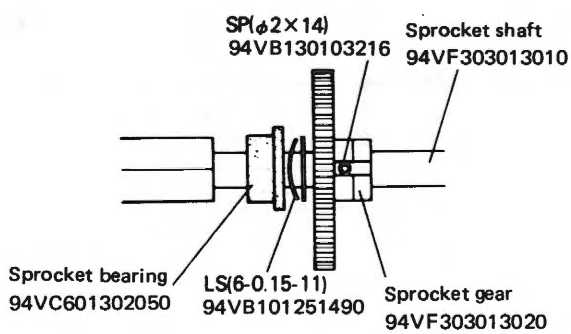
1) Pull out sprocket LA assembly
2) Pull out the paper guide roller.
3) Pull out sprocket RA assembly.
4) Disassembly sprocket LA and RA assemblies (Remove the sprocket lock lever, sprocket wheel, paper holding cover spring, G pin and paper holding cover.)
5) Pull out the sprocket gear (Spring pin)



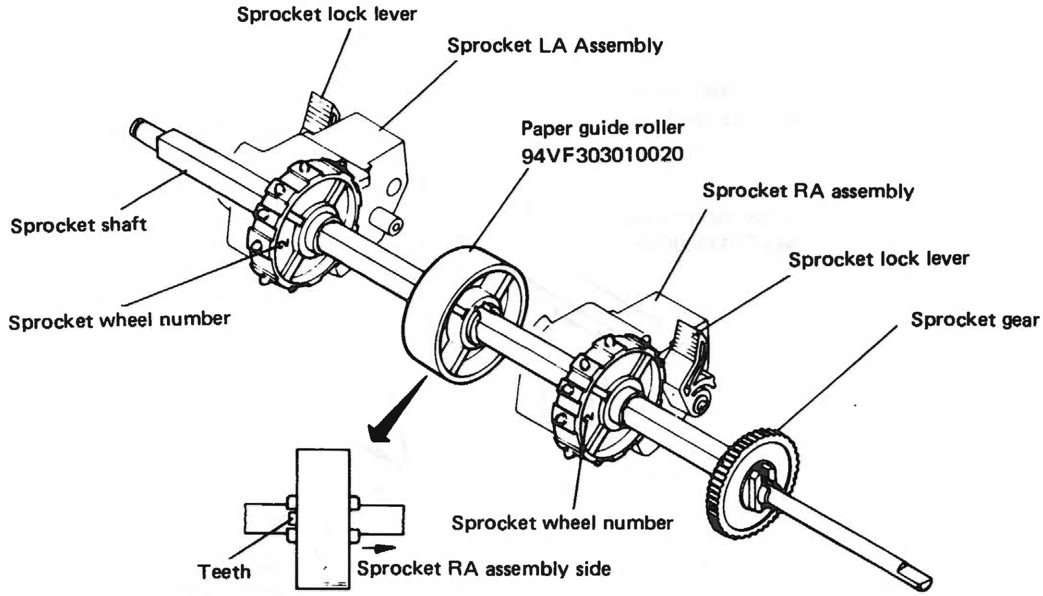


1-2 Assembly

(1) Assemble the sprocket unit in the reverse order used for disassembly.
- Note the direction for inserting LS (leaf spring).



- Attach the sprocket wheels to have the sprocket numbers be in the same direction and same angle in relation to the sprocket shaft.
- Note the direction for inserting the paper guide roller



Direction for inserting paper guide roller

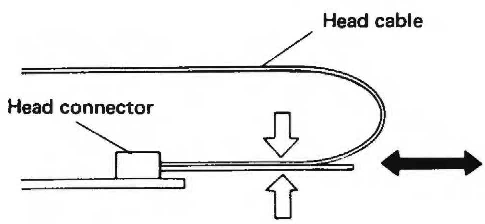
- Parts used for sprocket LA and sprocket RA are the same but the direction attaching the sprocket lever and paper holding cover is different.

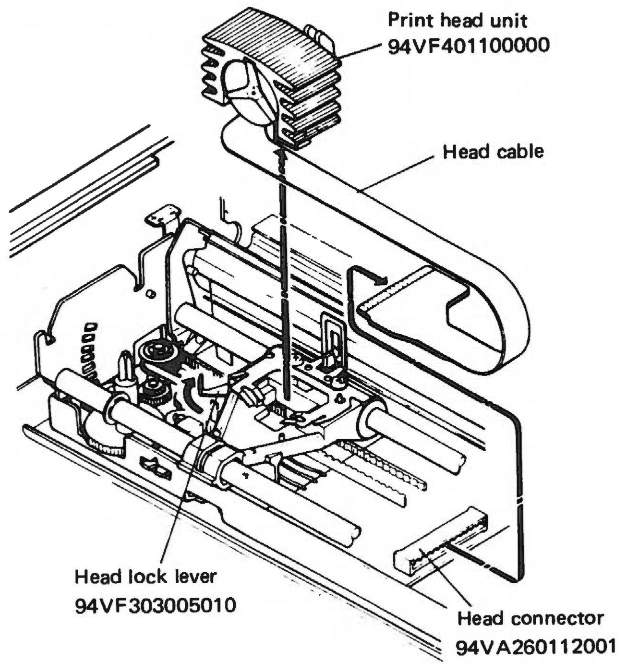
2. Print Head Unit

2-1 Disassembly

(1) Pull the head cable from the head connector.

- When inserting or pulling out the head cable, hold the place marked with arrows (⇨) and move the head cable horizontally in the direction of the arrow (⟺), while pushing the head connector.





(2) Turn the head lock lever clockwise.

(3) Remove the print head unit.

2-2 Assembly

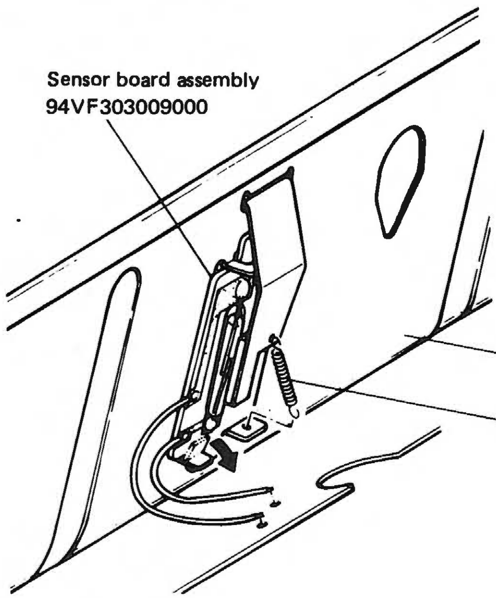
(1) Set the print head unit on the carriage.

(2) Insert the head cable into the head connector.

3. Paper Sensor

3-1 Disassembly

(1) Remove the soldered lead wire from the terminal board.,
(2) Stretch the bend in the outer paper guide [In the direction of the arrow.]
(3) Remove the paper sensor lever spring.
(4) Remove the paper sensor board assembly.
(5) Remove the soldering of the reed switch.



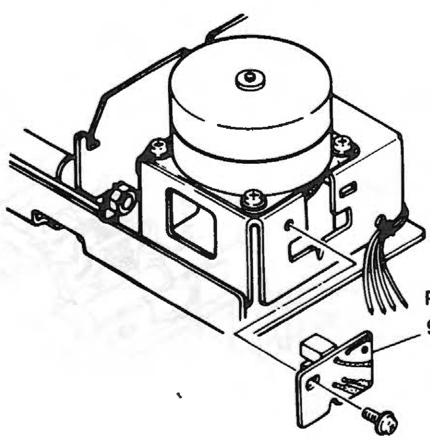
3-2 Assembly

(1) Assemble in the reverse order used for disassembly.

4. PTS Sensor

4-1 Disassembly

(1) Remove the soldered lead wire from the PTS sensor board.
(2) Remove the PTS sensor board assembly (2.5mm screw x 1).



4-2 Assembly and Adjustment

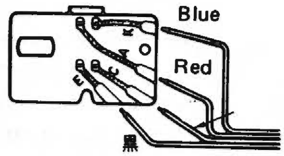
(1) Temporarily fasten the PTS board assembly.

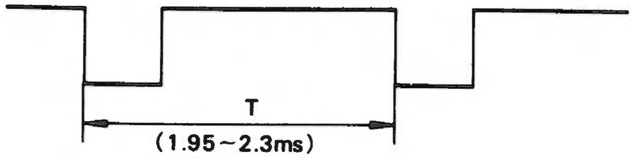
(2) Solder the lead wire.

(3) Adjust the period of the PTS signal.

1) Check T period while printing.

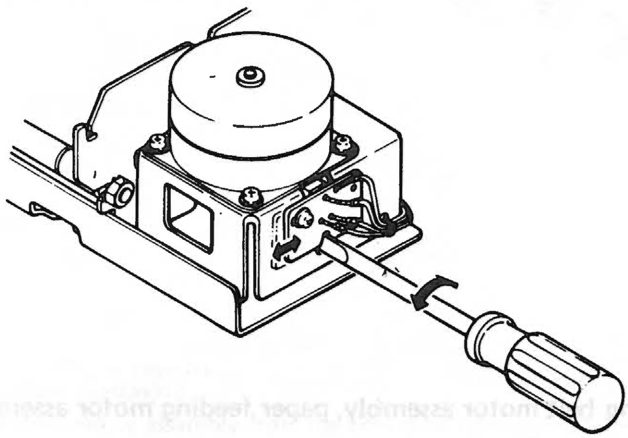
- Check the wave form with a synchroscope.
- Check that the print head has been fitted.





2) Adjust the PTS sensor board in the direction shown by the arrow in the figure so that the going and return T periods are almost equal.

3) After adjusting, fix the screw lock and paint the screw to lock it.



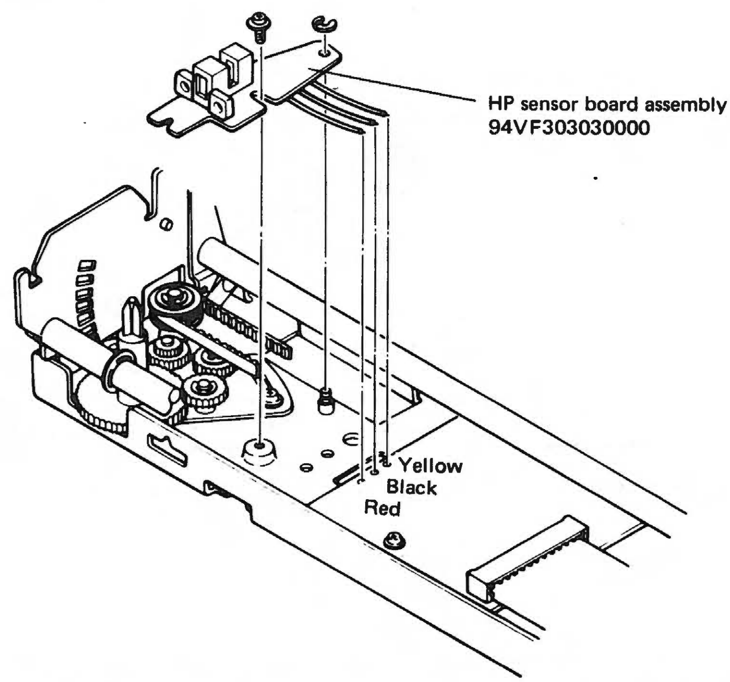
5. HP Sensor

5-1 Disassembly

(1) Remove the soldered lead wire of the HP sensor board from the terminal board.

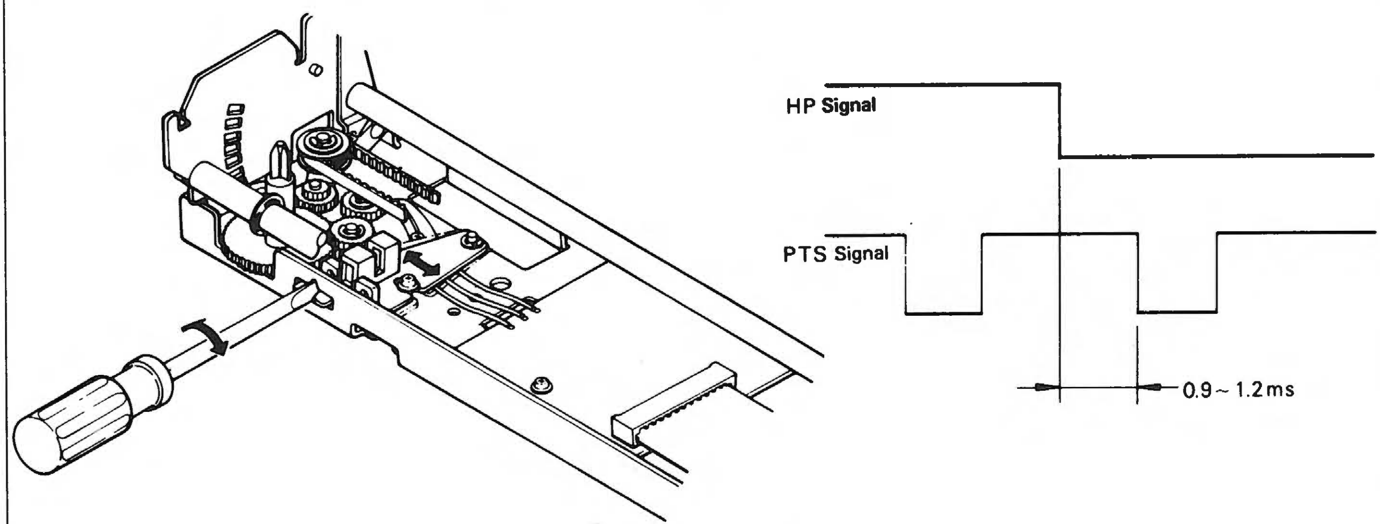
- Do not touch the timing belt the soldering iron.

(2) Remove the HP sensor board assembly (2.5mm screw. E ring).



5-2 Assembly and Adjustment

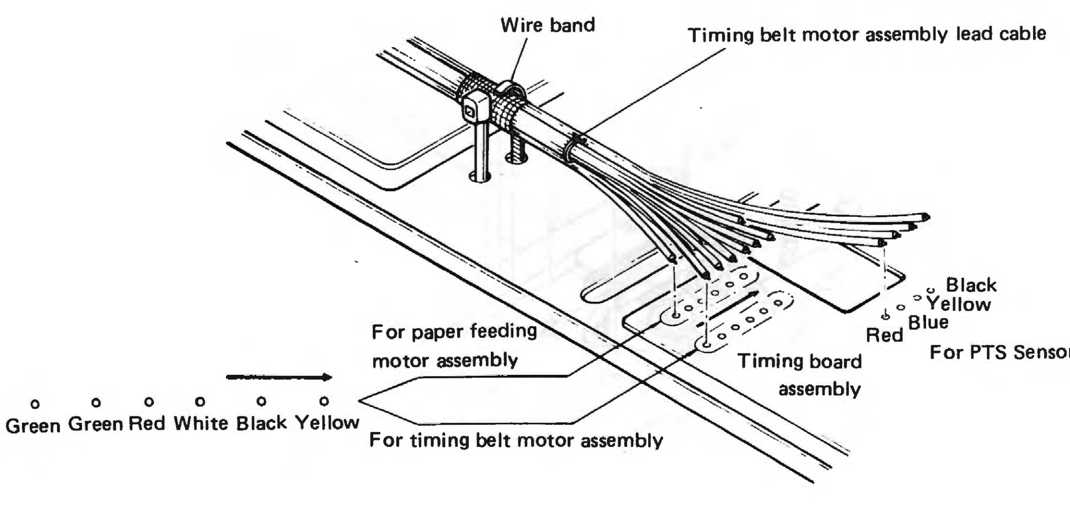
(1) Attach the HP sensor board assembly
  • Put in the screws temporarily.
(2) Solder the lead wire to the terminal board.
(3) Check the relation between the PTS signal and HP signal.
  • Check the wave form with a synchroscope.
  • Check that the print head has been set.
(4) When the phase is not right, adjust it by moving the HP sensor board in the direction of the arrow.
(5) After adjusting, fix the screw lock and paint the screw to lock it.



6. Motor Assembly (Timing belt motor assembly, paper feeding motor assembly, belt driving pulley)

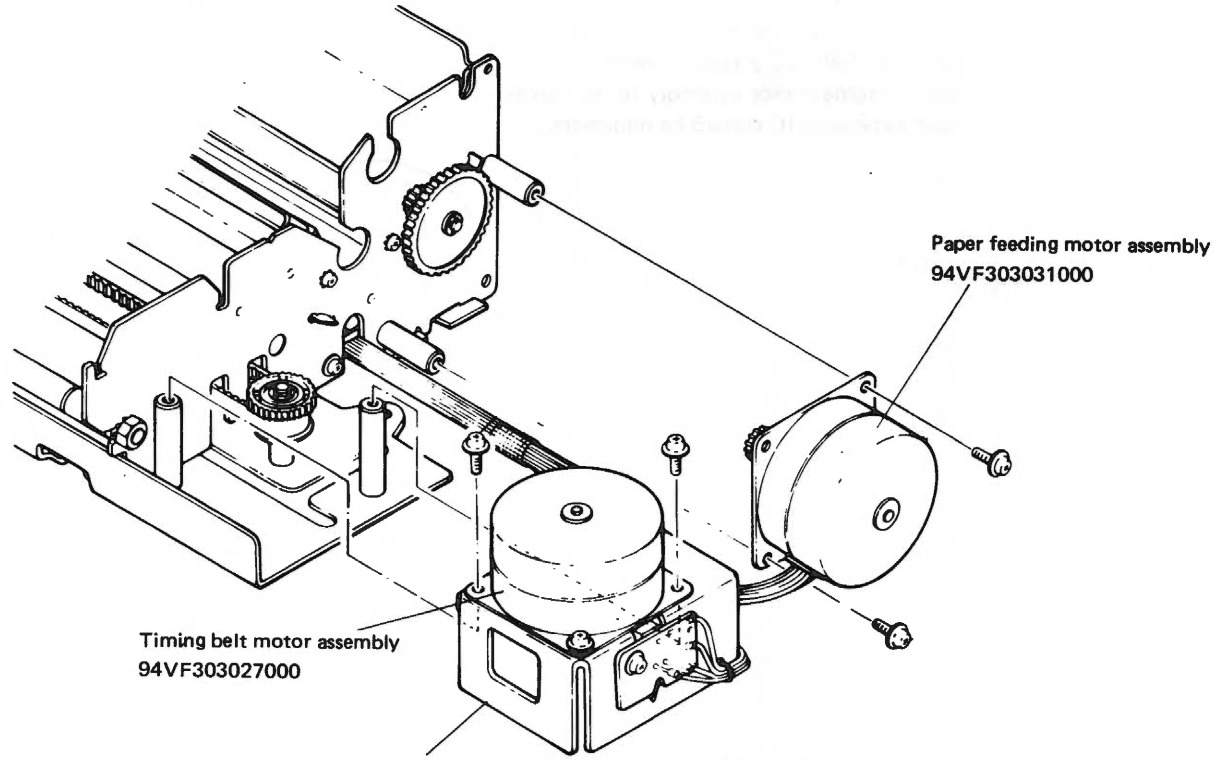
6-1 Disassembly

(1) Remove lead wires of the timing belt motor assembly from the terminal board.
(2) Remove lead wires of the paper feeding motor assembly from the terminal board.
(3) Remove the PTS sensor lead wires from the terminal board.
(4) Take off the wire band.



(5) Remove the paper feeding motor assembly. (2.5mm screw x 2)
• When removing it, only take out the two screws shown in the figure so that the motor heat sinker and HP sensor board assembly come out together.

(6) Remove the timing belt motor assembly. (2.5mm screw x 2)

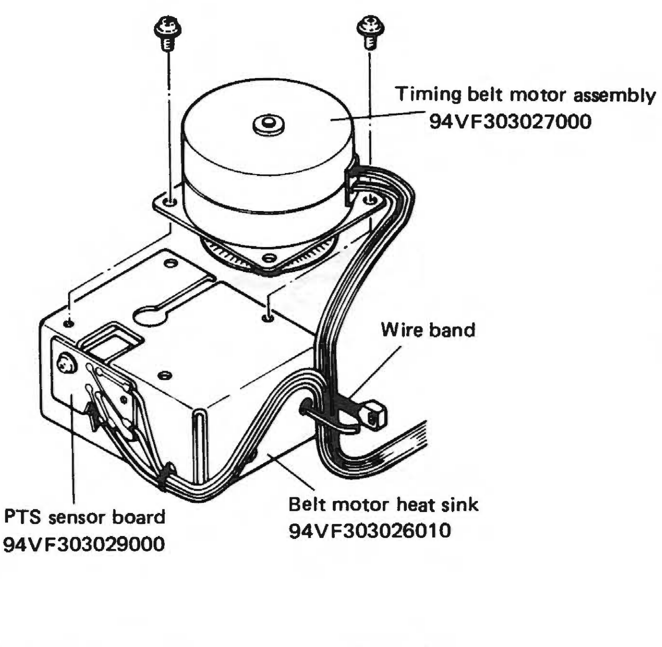


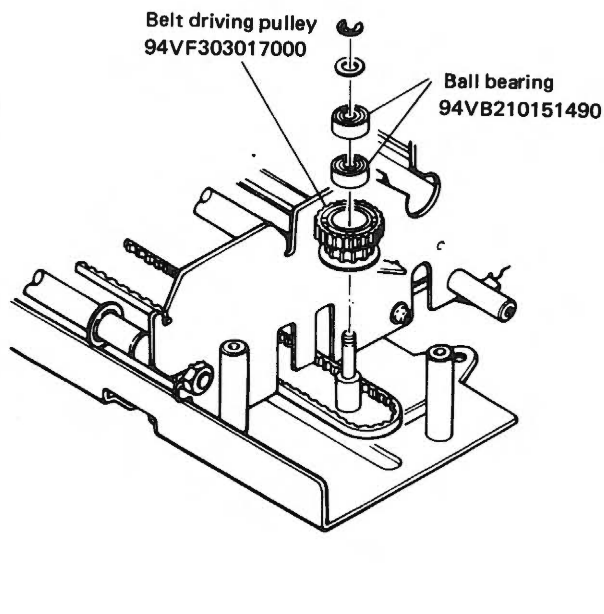
(7) Remove the timing belt motor assembly from the timing belt motor heat sink.

(8) Remove the PTS sensor board assembly.

(9) Remove the belt driving pulley (E ring).
• When removing the belt driving pulley, first loosen the timing belt. (Refer to page 34)

(10) Remove the ball bearing from the belt driving pulley.





6-2 Assembly and Adjustment

(1) Attach the timing belt motor assembly to the timing belt motor heat sink.

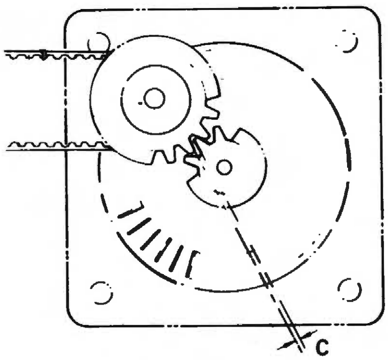
(2) Attach the PTS sensors board.

(3) Place the ball bearing in the belt driving pulley.

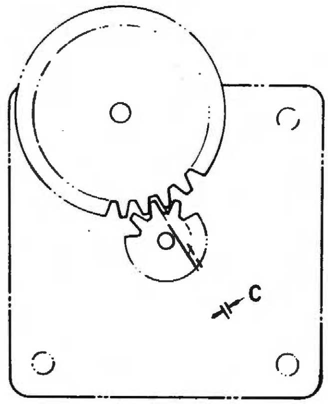
(4) Put in the belt driving pulley.

(5) Attach the timing belt motor assembly and timing belt motor heat sink to the frame.
• Check the gear backlash. (C should be minimum.)

(6) Attach the paper feeding motor assembly to the frame.
• Check the gear backlash. (C should be minimum.)



(Timing belt motor backlash)



(Paper feed motor backlash)

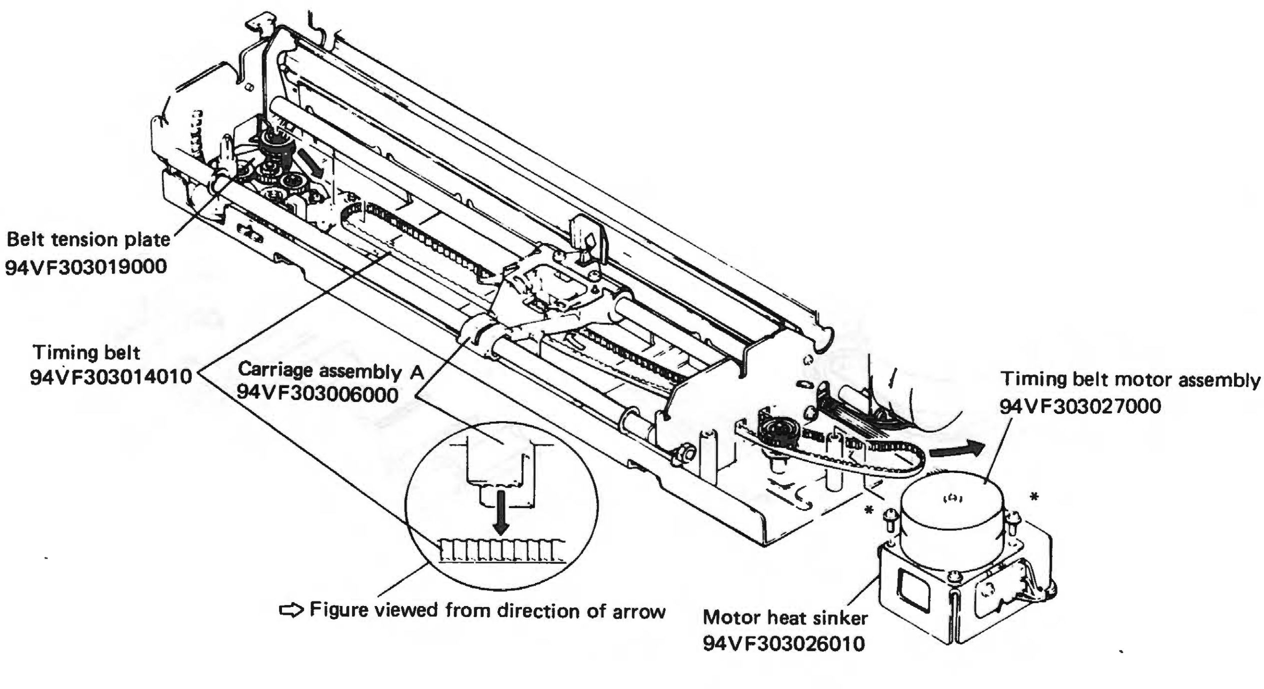
7. Timing Belt

7-1 Disassembly

(1) Remove the timing belt motor assembly and motor heat sinker. (2.5mm screw x 2)
Do not mix up the screws. (Refer to * mark in the figure.)

(2) Pull the timing belt from carriage assembly A.

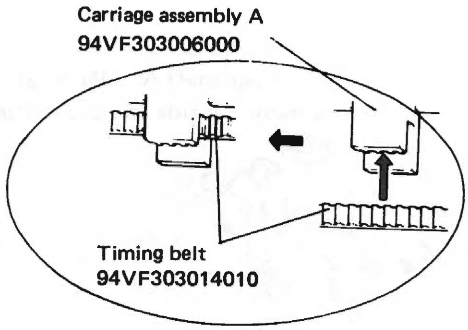
(3) Loosen the lock screw on the belt tension plate and remove the timing belt. (2.5mm screw)



7-2 Assembly and Adjustment

(1) Hang the timing belt on the belt driving pulley and belt driven pulley.

(2) Insert the timing belt into the carriage.



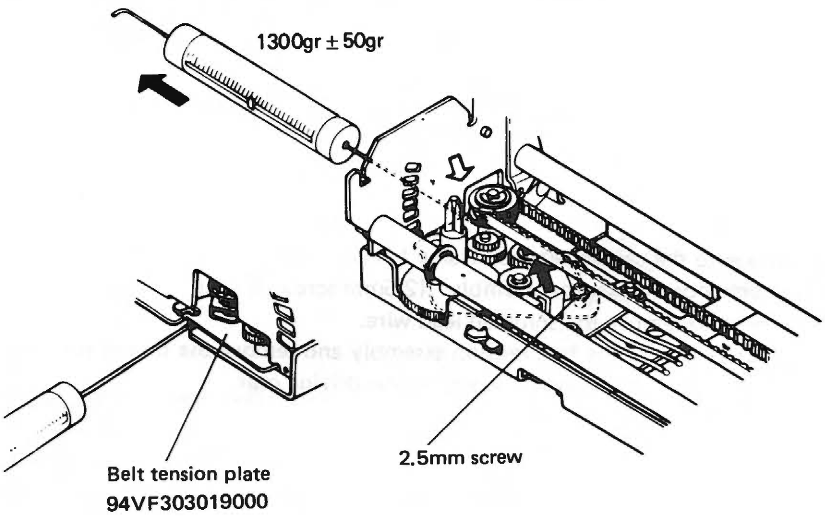
(3) Temporarily fasten the belt tension plate while gently stretching the timing belt. (2.5mm screw x 2)

(4) Adjust the tension of the timing belt.

• Using the hole in the belt tension plate, adjust it to its rating on the spring scale.

[Standard value] 1300gr ±50gr

(5) Tighten the lock screw after the adjustment and paint the screw to lock it.



8. Belt Tension Plate Assembly (Including ribbon driving gear)

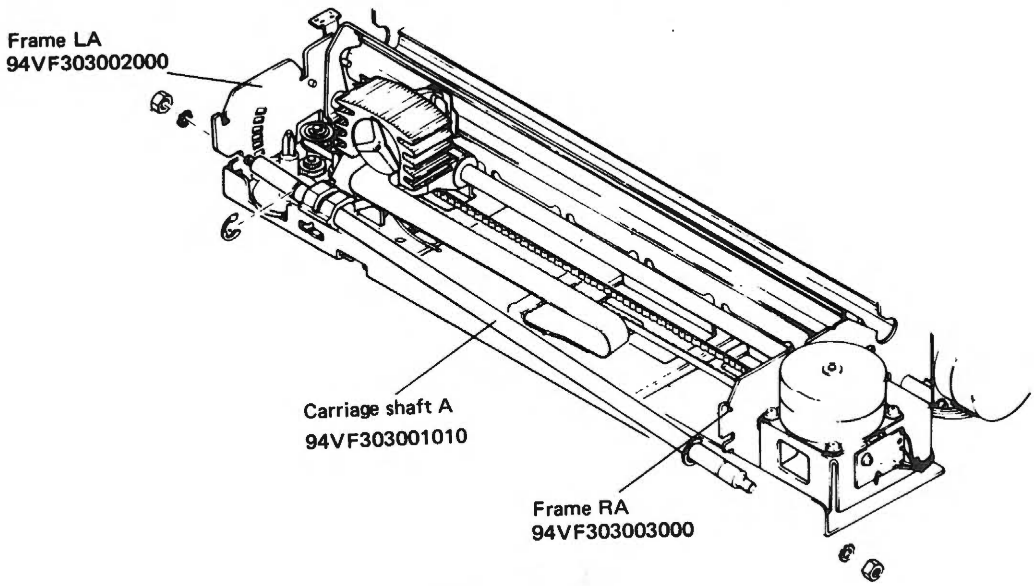
8-1 Disassembly

(1) Remove carriage guide side A.

1) Remove E ring on frame LA.

2) Remove the nuts on carriage shaft A. (4N x 2)

3) Move the carriage to frame LA side and pull carriage shaft A out to the right.



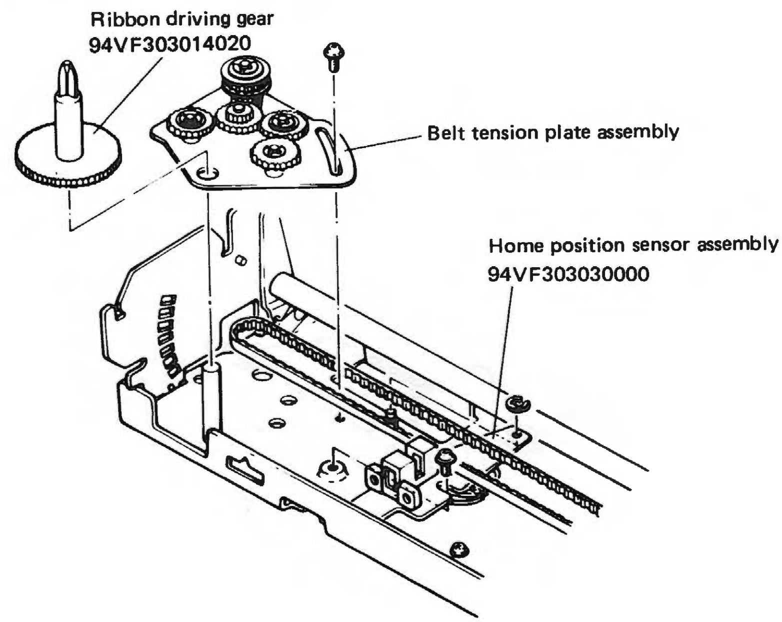
(2) Move the carriage to the center between frame LA and RA.

(3) Remove the home position sensor assembly. (2.5mm screw, E ring)

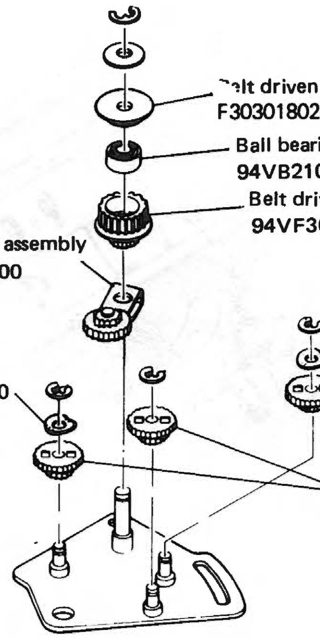
• There is no need to remove the soldered lead wire.

(4) Remove the lock screw for the belt tension assembly and remove the timing belt. (2.5mm screw)

(5) Pull out the belt tension plate assembly and ribbon driving gear.

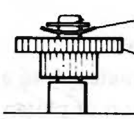


(6) Disassemble the belt tension plate assembly.
1) Remove the belt driven pulley flange. (E ring)
2) Pull out the belt driven pulley.
3) Pull out the planetary lever assembly.
4) Remove the planetary pinion. (E ring x 3)



8-2 Assembly and Adjustment

(1) Assemble the belt tension plate assembly.
1) Put in the planetary pinion. (E ring x 3)
• Do not make a mistake about the direction and position of LS (leaf spring).
2) Put in the planetary lever assembly.
3) Put in the belt driven pulley.
4) Put in the belt driven pulley flange.

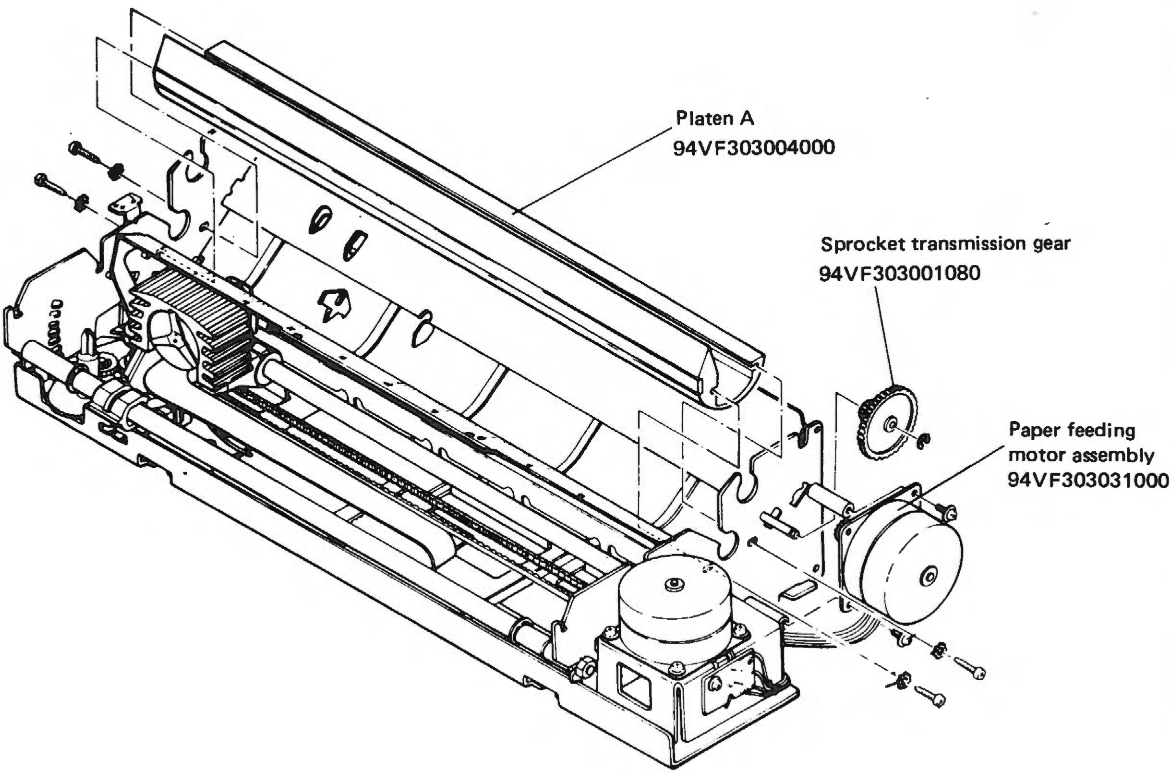


(2) Put in the ribbon driving gear and ribbon tension plate and attach the timing belt (Temporarily fasten with 2.5mm screw.)
(3) Attach the home position sensor assembly. (E ring)
(4) Assemble carriage shaft A in the reverse order used for disassembly.
(5) Adjust the belt tension properly. (Refer to section 7.2 on page 33.)
(6) Check the HP signal and PTS signal. (Refer to section 4.2 on page 29 and section 5.2 on page 30.

9. Platen (Including sprocket transmission gear)

9-1 Disassembly

(1) Remove the sprocket unit. (Refer to section 1-1 on page 25.)
(2) Remove the paper feeding motor. (Refer to section 6-1 on page 30.)
• There is no need to remove the soldered lead wire.
(3) Remove the sprocket transmission gear. (E ring)
(4) Remove platen A. (3mm screw x 4)



9-2 Assembly and Adjustment

(1) Temporarily fasten platen A to assembly LA and RA. (3mm screw x 4)

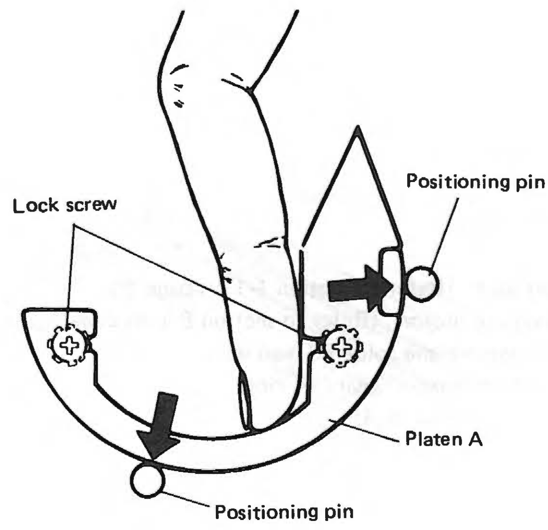
(2) Determine the position of platen A and paint the screws to lock them after fastening them.

• Determine the position of the platen then push in the direction of the arrow so there is no space between the platen and positioning pins and then tighten the lock screws.

(3) Attach the sprocket transmission gear. (E ring)

(4) Attach the paper feeding motor. (Refer to section 6-2 on page 32.)

(5) Attach the sprocket assembly. (Refer to section 1-2 on page 26.)



10. Adjusting Lever (Including adjustment of basic space between platen and print head)

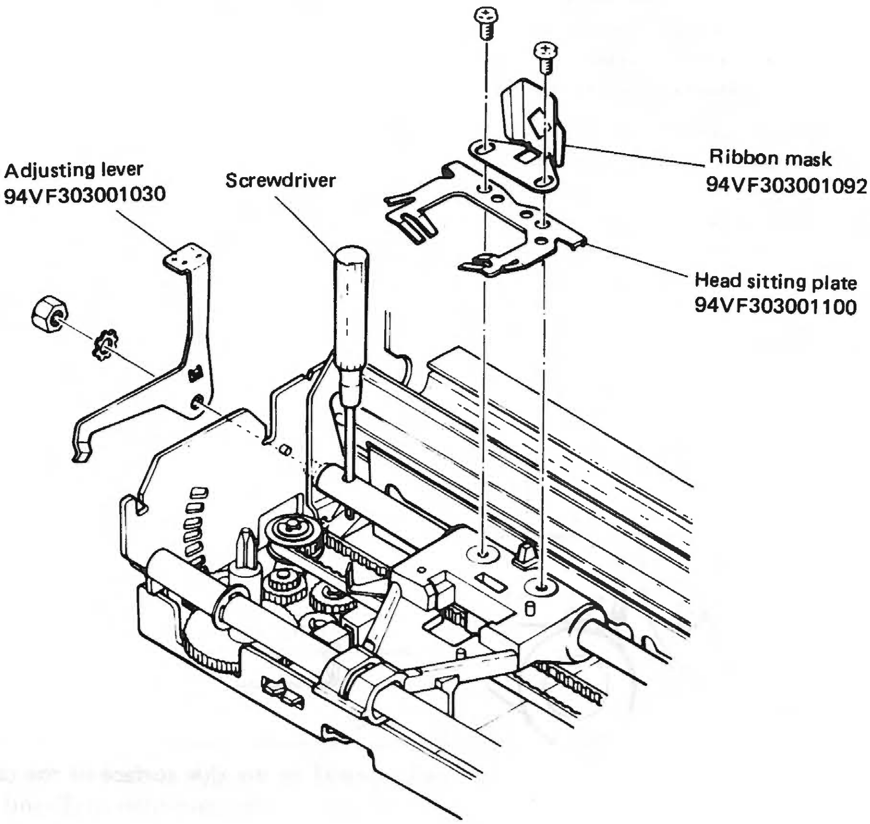
10-1 Disassembly

(1) Move the adjusting lever to the middle step in the hole in frame LA.

(2) Remove the print head unit. (Refer to section 2-1 on page 27.)

(3) Insert a screwdriver or similar tool into the hole in carriage shaft B to stop it from turning and remove the nuts holding it. (4 N).

(4) Remove the ribbon mask and head sitting plate. (2.5mm screw x 2)

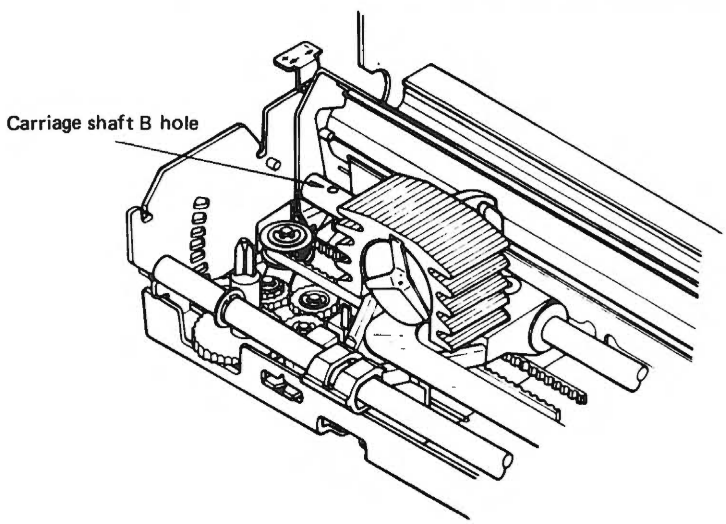


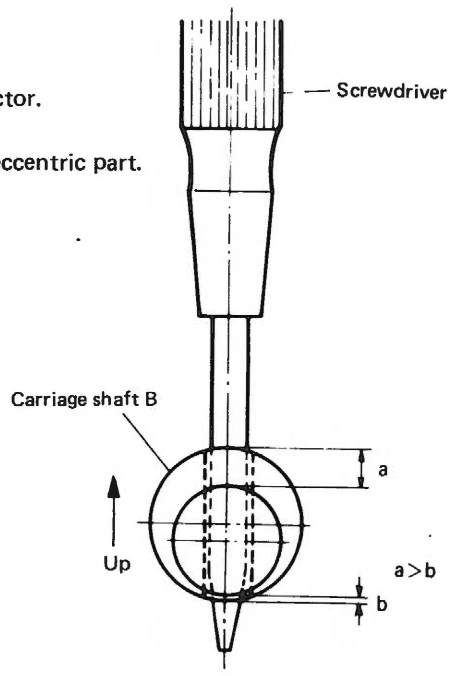
10-2 Assembly and Adjustment

(1) Temporarily fasten the adjusting lever. (4N)
  • Set it in the middle step of the adjusting hole.

(2) Attach the print head unit to the carriage.
  • There is no need to insert the head cable into the head connector.

(3) Turn carriage shaft B so the hole is up.
  • It is eccentric so pay attention to the top and bottom of the eccentric part.





(4) Move the carriage to the 1 side on the scale graduation.

(5) Insert a narrow screwdriver or similar tool into the carriage shaft B hole and adjust the clearance between the dot head tip and platen by moving it forward and back.

- [Standard clearance] 0.65mm
- Position the carriage shaft where the platen and platen head tip lightly touch both sides of a thickness gauge.

(6) Fix the adjusting lever

- Tighten it so the clearance does not change.

(7) Remove the print head unit.

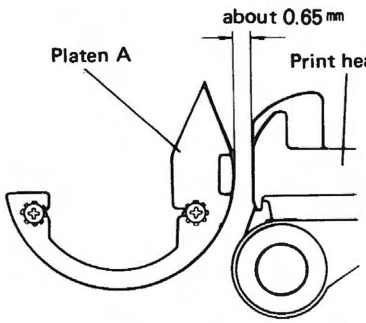
(8) Temporarily fasten the head sitting plate and ribbon mask. (2.5mm screw x 2)

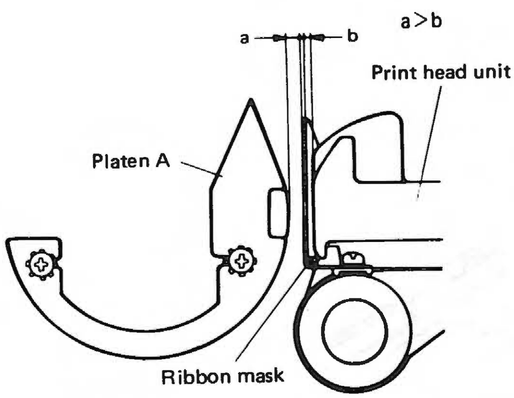
(9) Attach the print head unit.

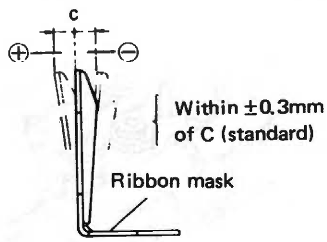
- Insert the head cable into the connector.

(10) Fasten the ribbon mask and head sitting plate.

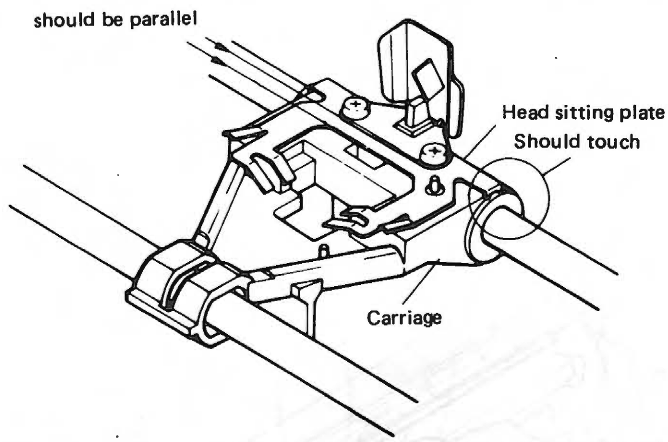
1) Adjust the adjusting lever to its uppermost step.
   - Adjust it all the way to the side marked (–).
2) Adjust the relative position of the platen, ribbon mask and print head tip as shown in the figure.
   - Check that the ribbon mask is at a right angle.



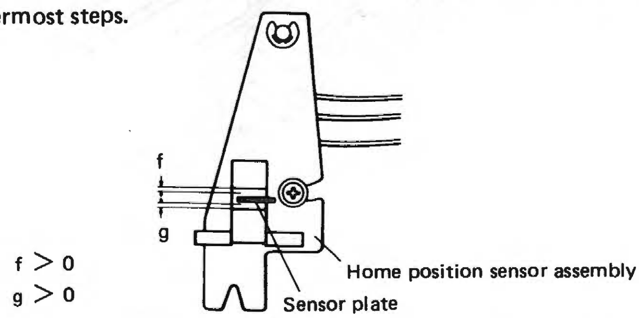




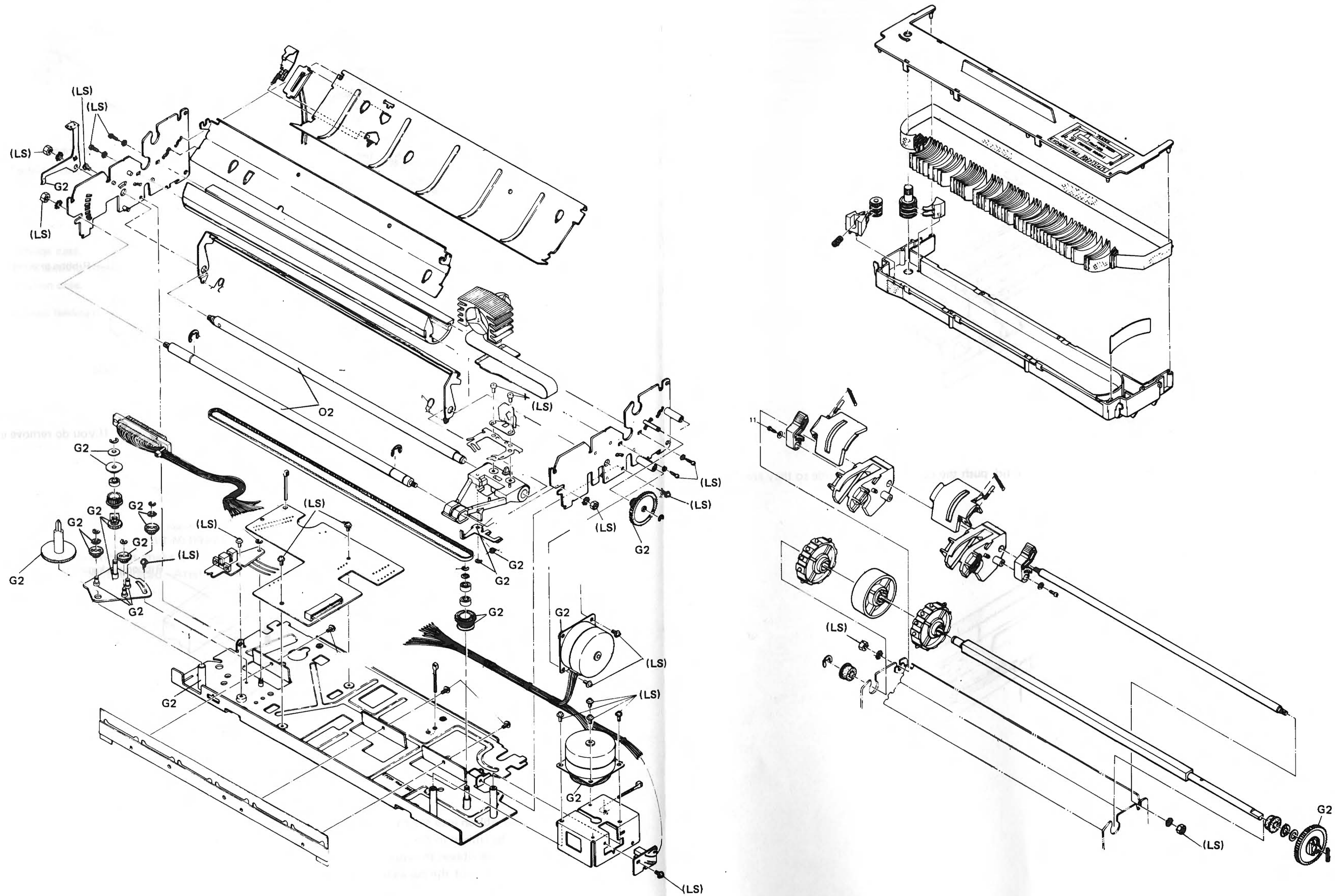
3) Put the head sitting plate approximately parallel to the side surface of the carriage and in contact with the bearing. In addition, position it so it satisfies the conditions in (2) and fasten it with screws.



(11) Do not touch the home position sensor assembly and carriage sensor plate when setting the adjusting lever to the uppermost and lowermost steps.



■ **Points for Oiling and Painting (To lock screws)**



REPLACING INK RIBBON FROM CARTRIDGE

1. Remove the cartridge ribbon from the printer.

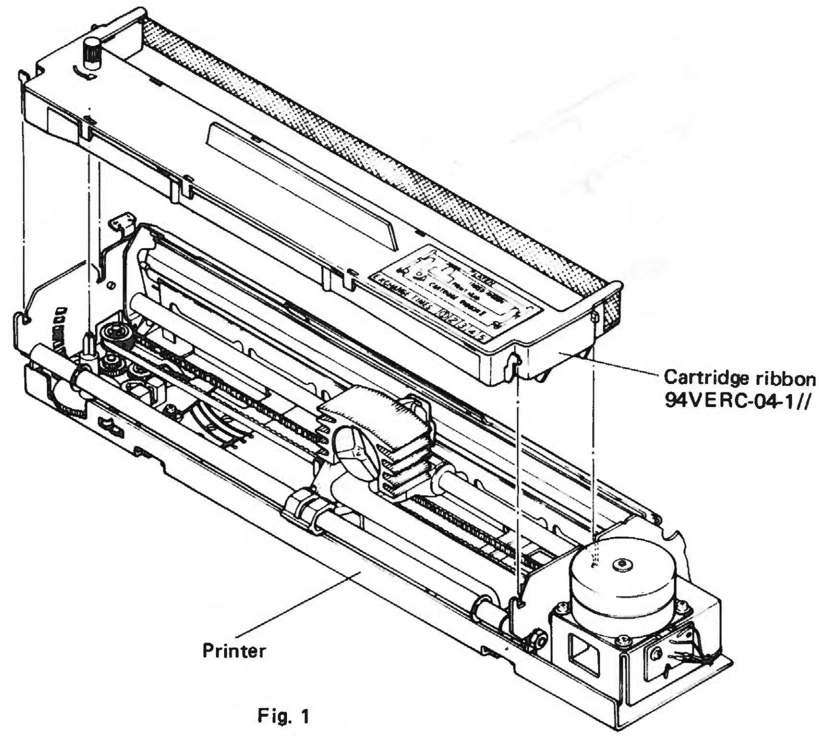


Fig. 1

2. Remove the cartridge case lid from the cartridge case frame.

Note: There are catches (→) in 6 places. When removing the lid, push the catches to the outside so they aren't bent and remove the cartridge case lid.

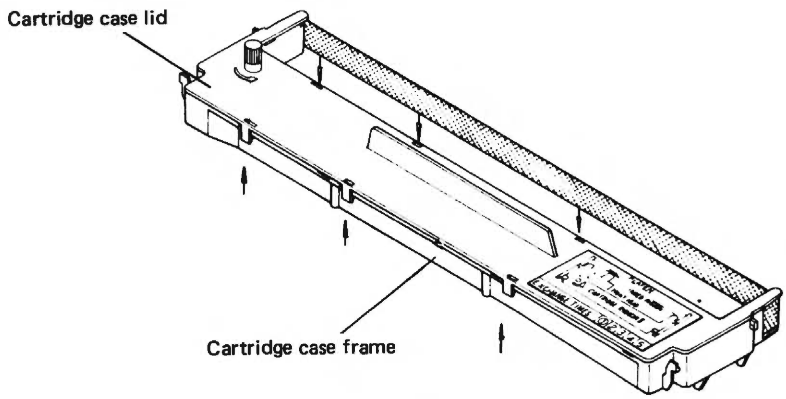


Fig. 2

3. Remove the used ink ribbon

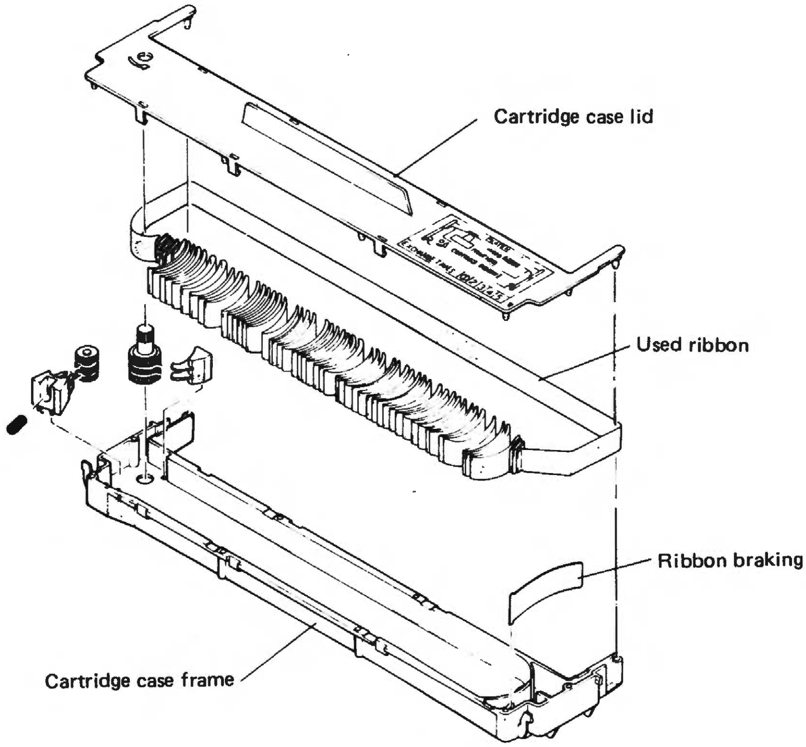


Fig. 3

Note: Fig. 3 is an illustration and there is no need to remove everything as shown. If you do remove everything, the relative positions are as shown in the figure.

4. Remove the new ribbon with the ribbon package from its cellophane case.

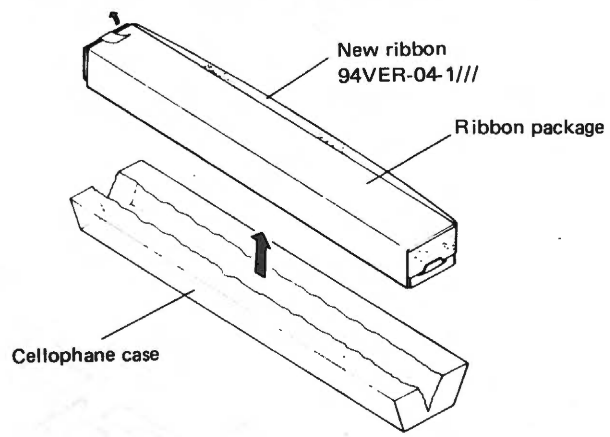


Fig. 4

5. Put the new ribbon into the cartridge.

(1) Leave the ribbon in the package and put it into the cartridge as shown in Fig. 5.
(2) Pass the ink ribbon through the path as shown in Fig. 6.
(3) Hold the top of the package with your hand and pull out the bottom of the package in the direction of the arrow (Fig. 5).
(4) Remove the top of the package. (Note: The ink ribbon is not removed from the cartridge.)

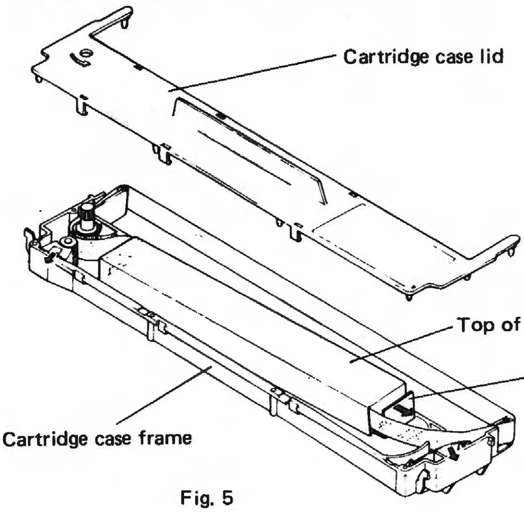


Fig. 5

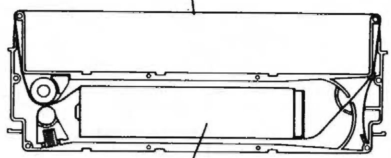


Fig. 6

6. **Put in the cartridge case.**
7. **Turn the ribbon feeding rooler in the direction marked on the cartridge and check that the ribbon is not pinched between the ribbon case.**

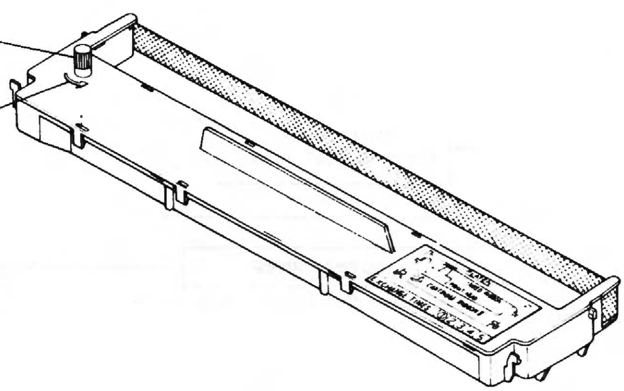
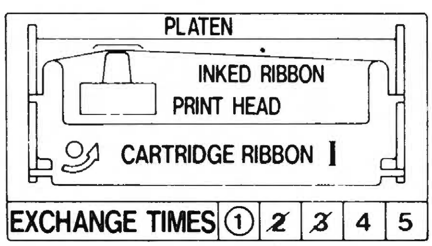


Fig. 7

Note: After replacing the ink ribbon, make a check on the cartridge label that indicats number of times the cartridge ribbon has been replaced. After 5 checks, use a new cartridge ribbon.

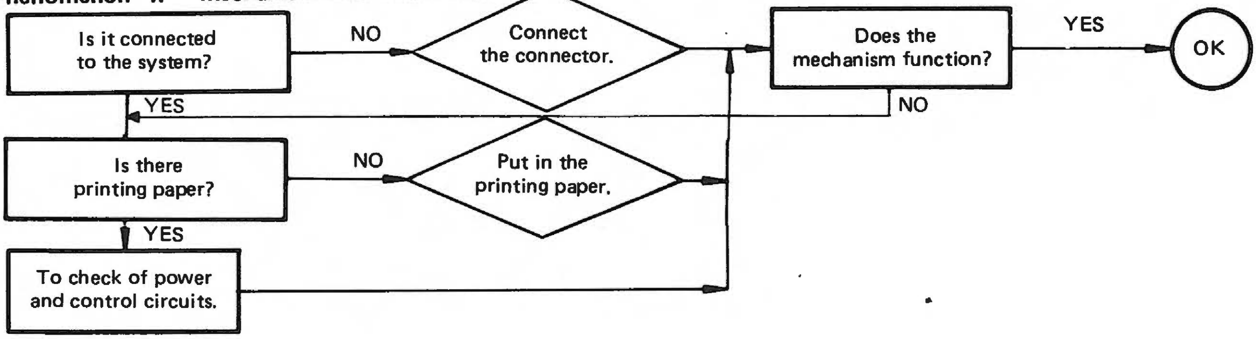
Example



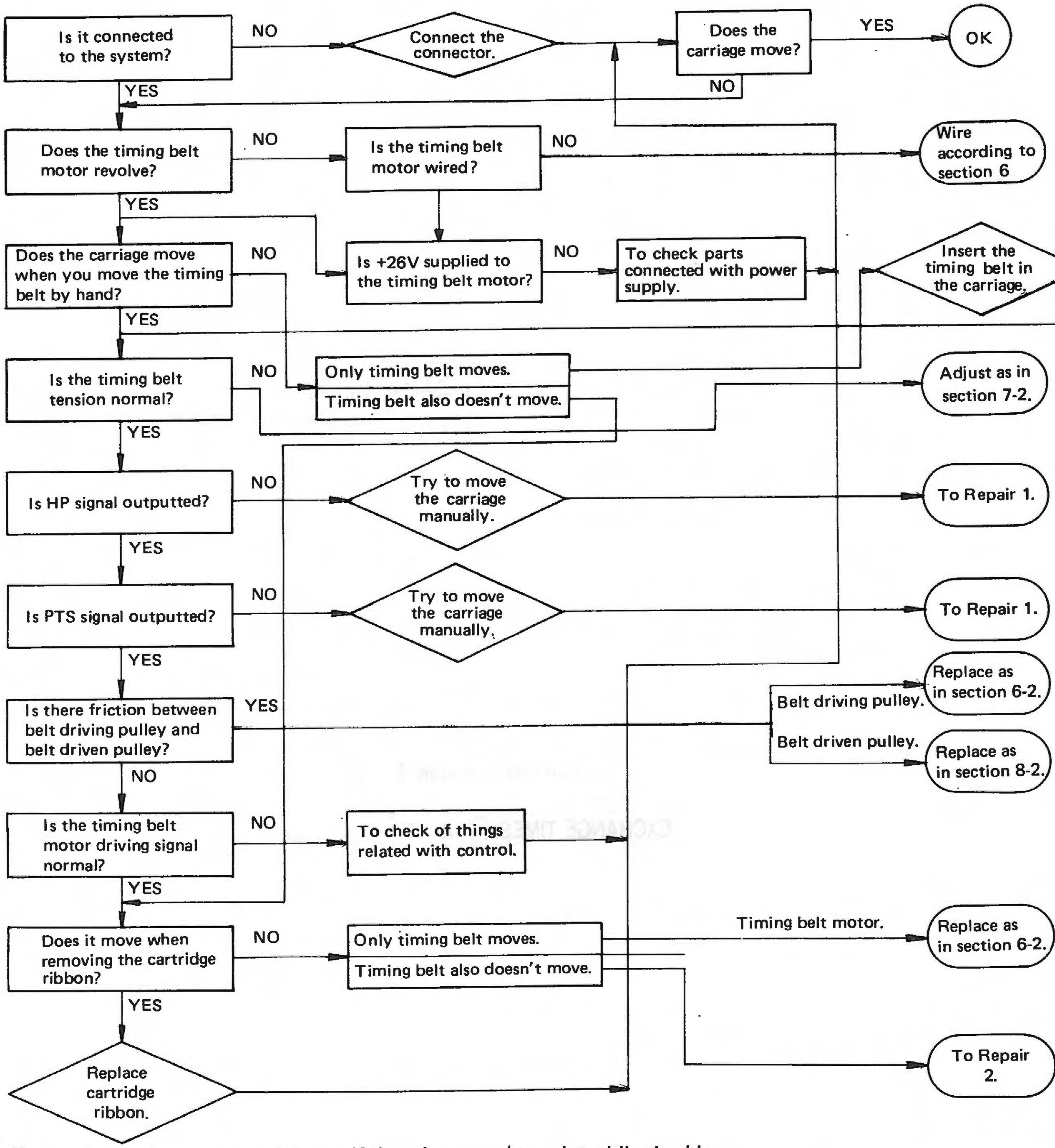
REPAIR PROCEDURE FOR PRINTER MECHANISM

■ Flow Chart to Check Cause of Defective

Phenomenon 1. Mechanism does not function

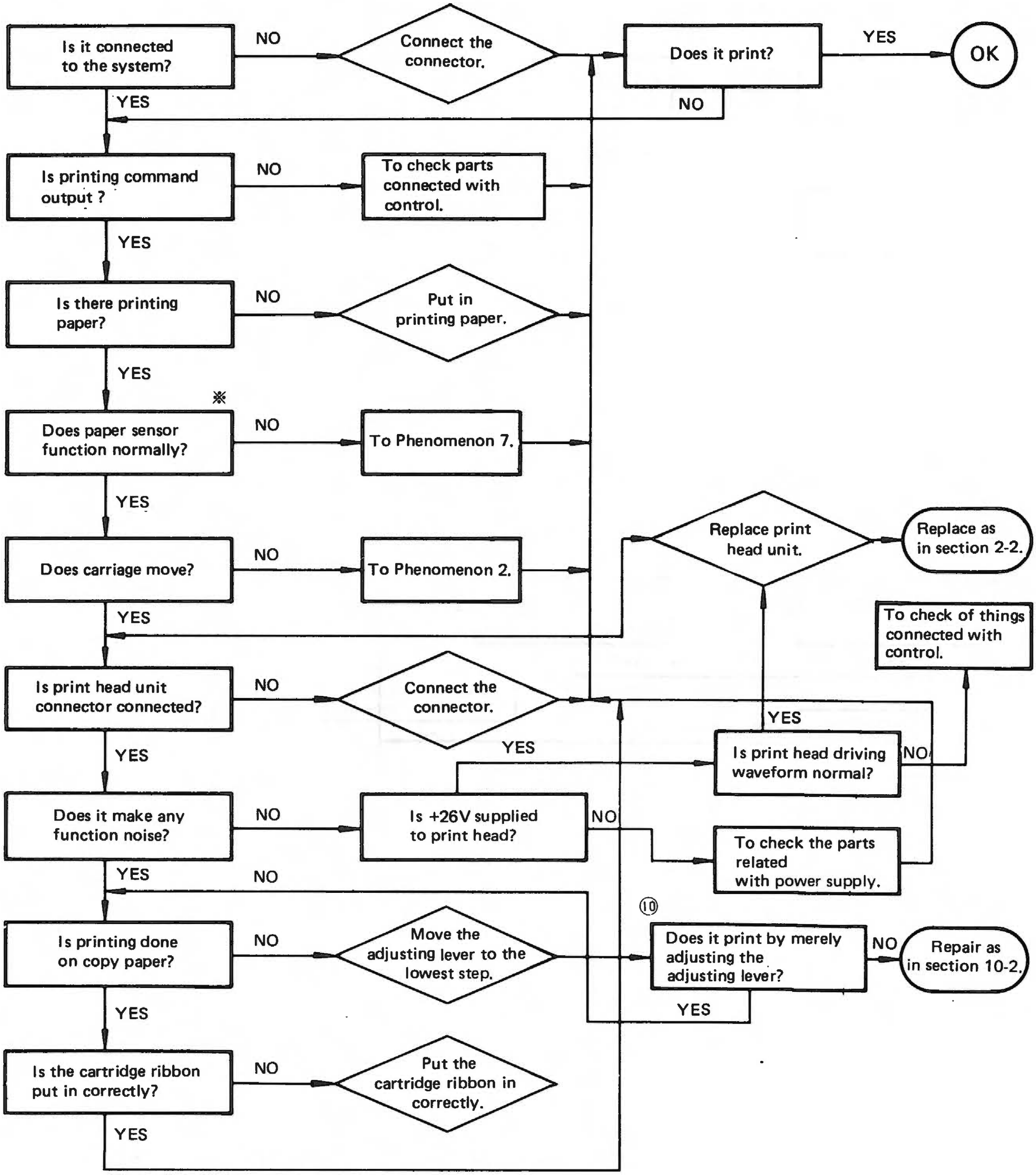


Phenomenon 2. Carriage does not move.



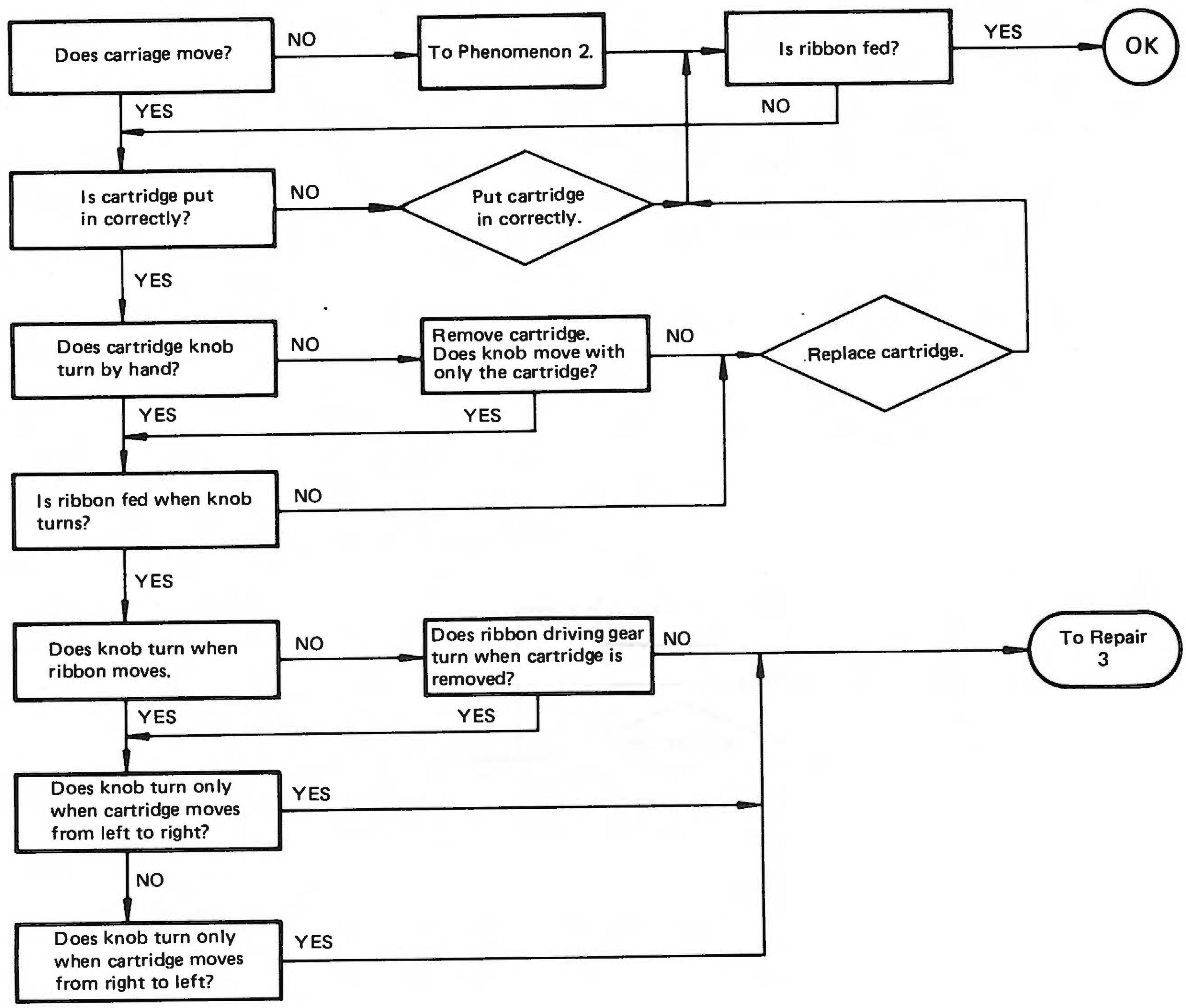
Note: Active the paper to print even if there is no need to print while checking.

Phenomenon 3. Does not print at all.

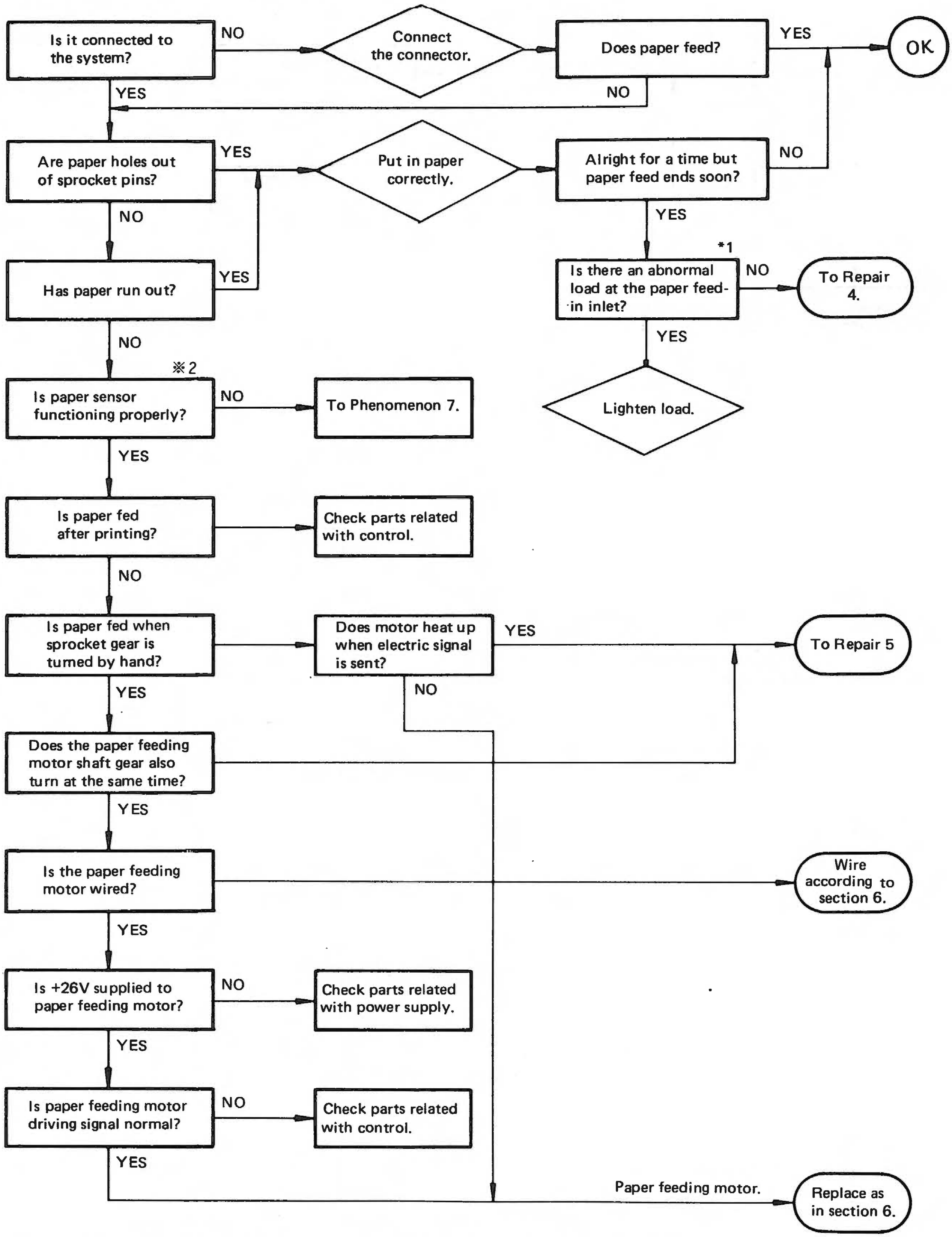


* Remove the paper and check if there is a "clicking" sound when the sensor lever approaches the reed switch.

Phenomenon 4. Ribbon does not feed.



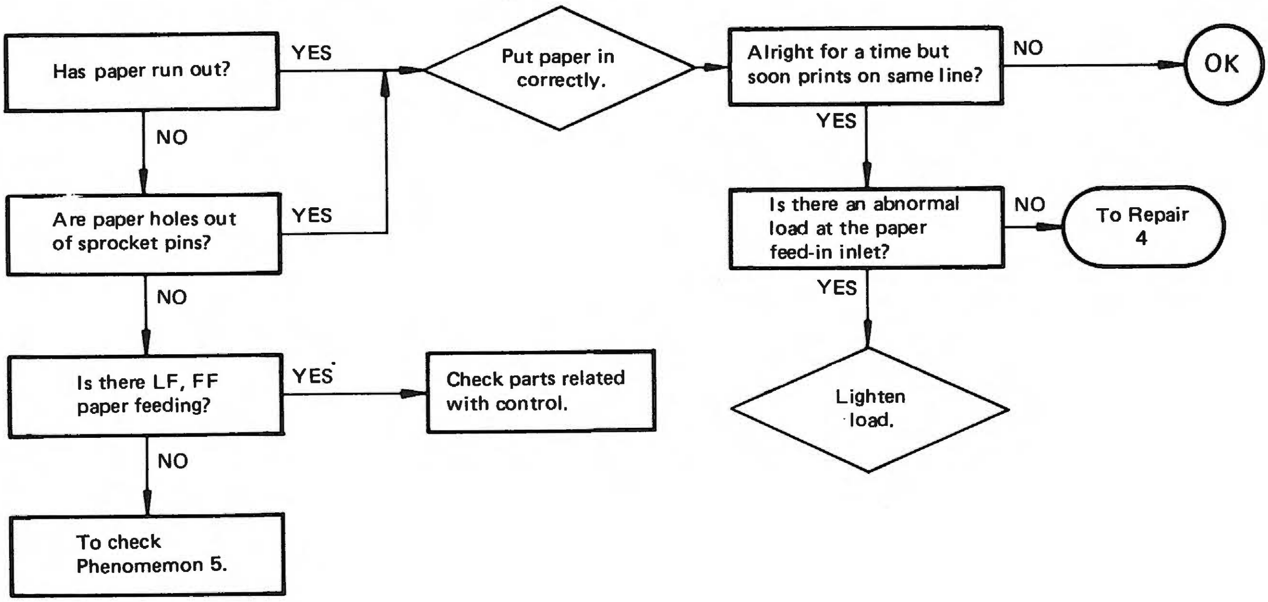
Phenomenon 5. Paper does not feed.



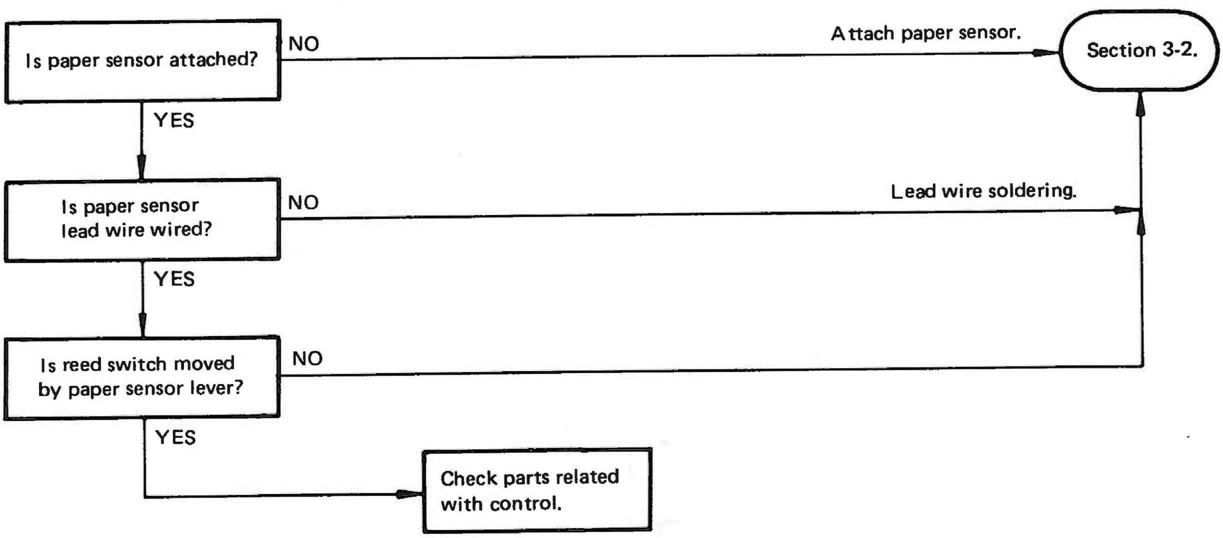
*1 Check if there is a load on the paper when it is in the paper box, system case, etc.

*2 Remove the paper and check if there is a "clicking" sound when the sensor lever approaches the reed switch.

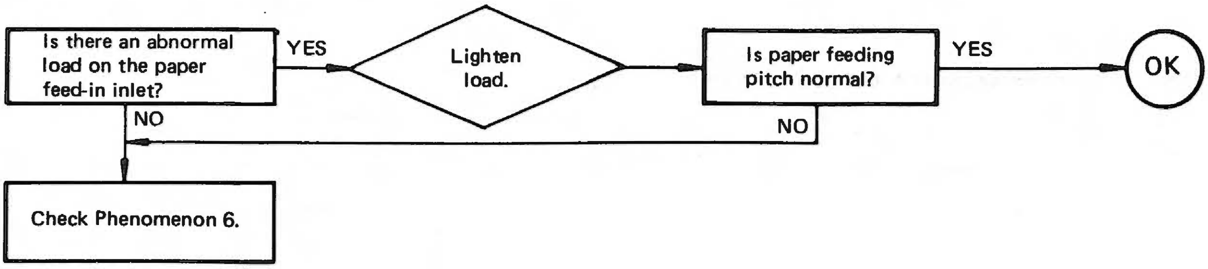
Phenomenon 6. Prints on the same line.



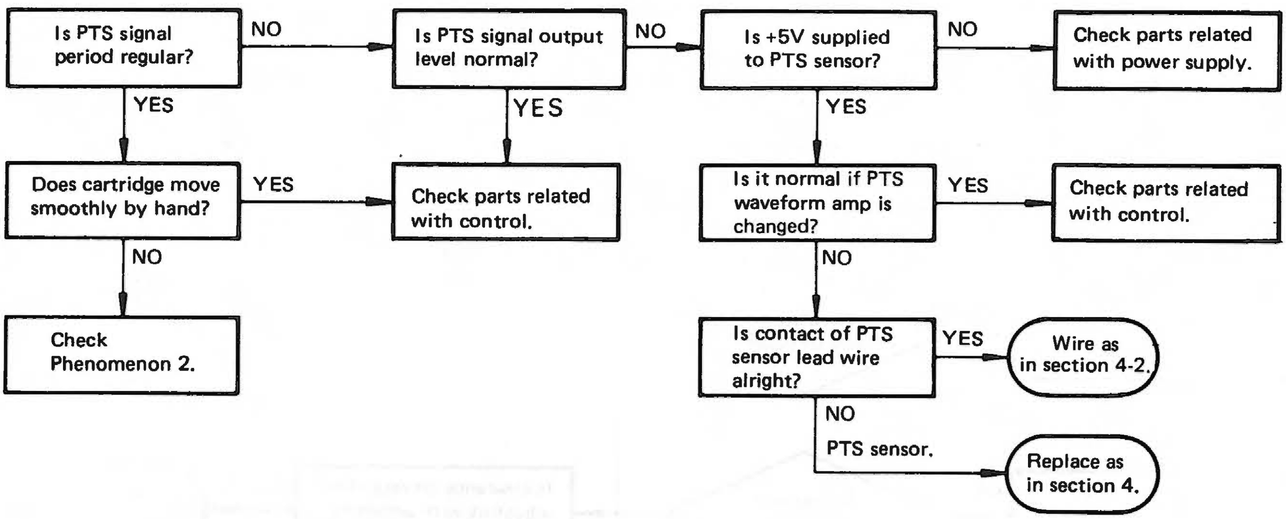
Phenomenon 7. Prints even without paper.



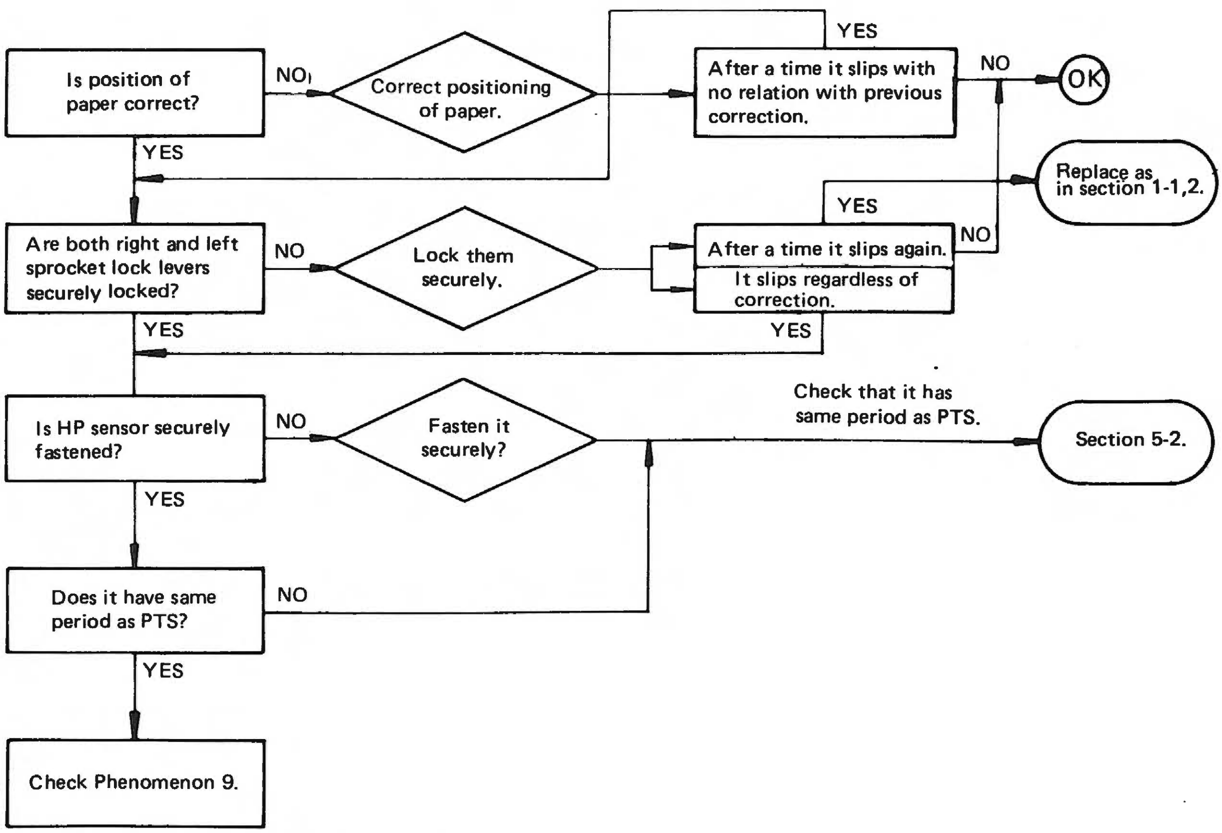
Phenomenon 8. Paper feed pitch is abnormal.



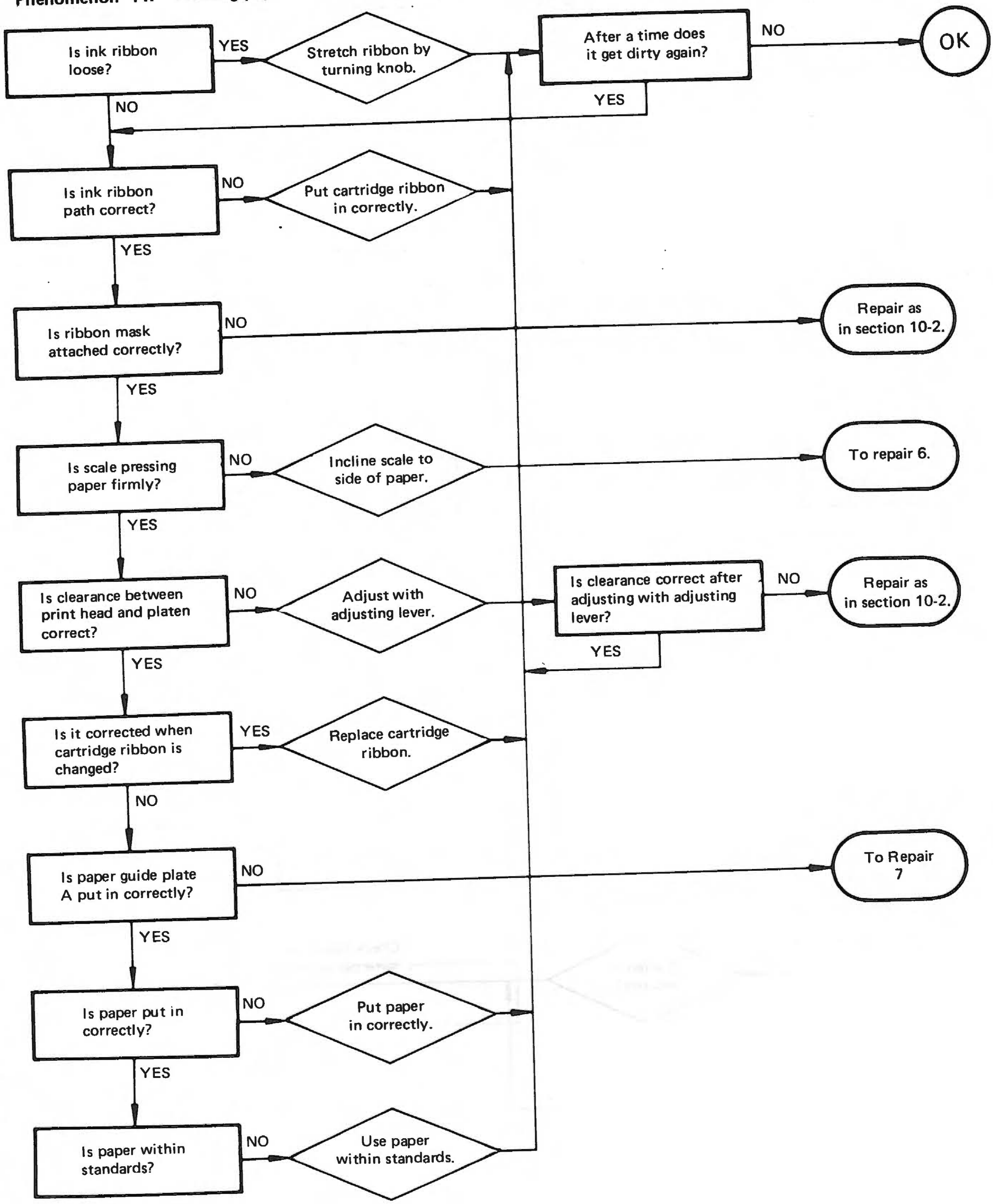
Phenomenon 9. Density of characters varies across line.



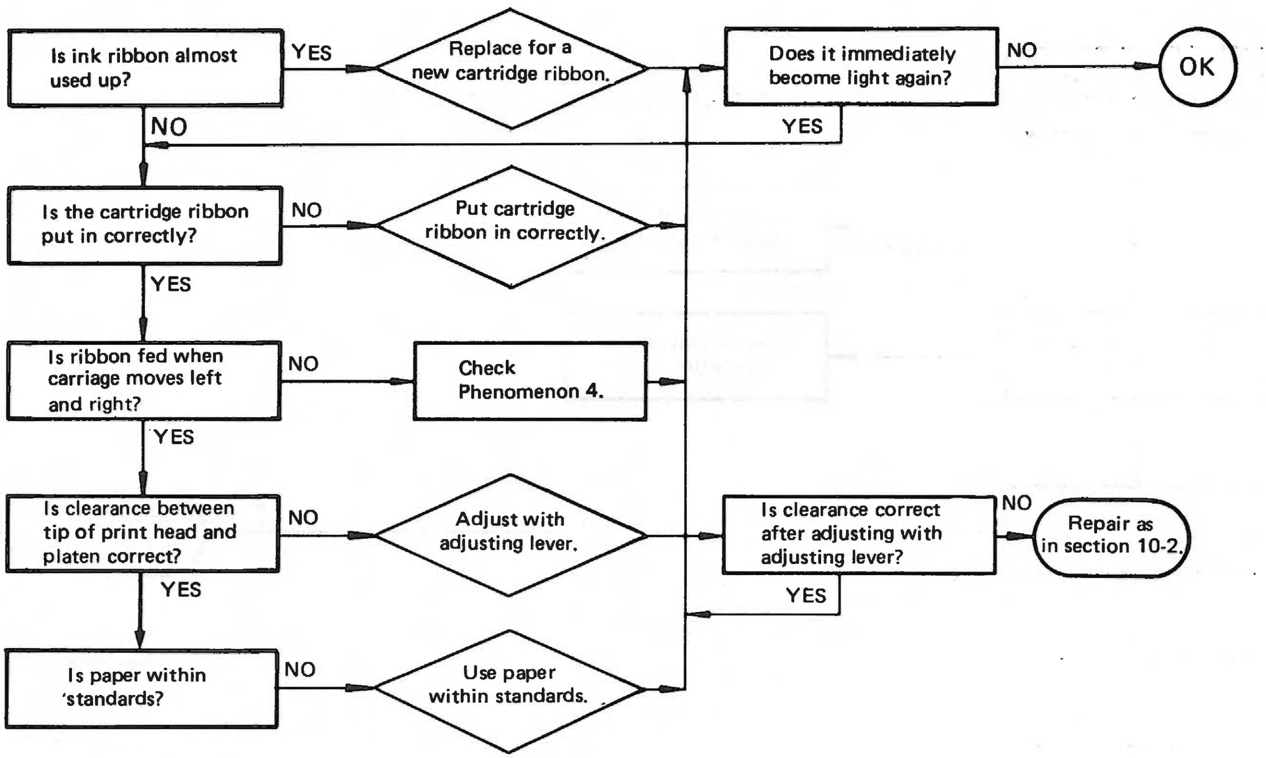
Phenomenon 10. Fast digit characters of printing shifts.



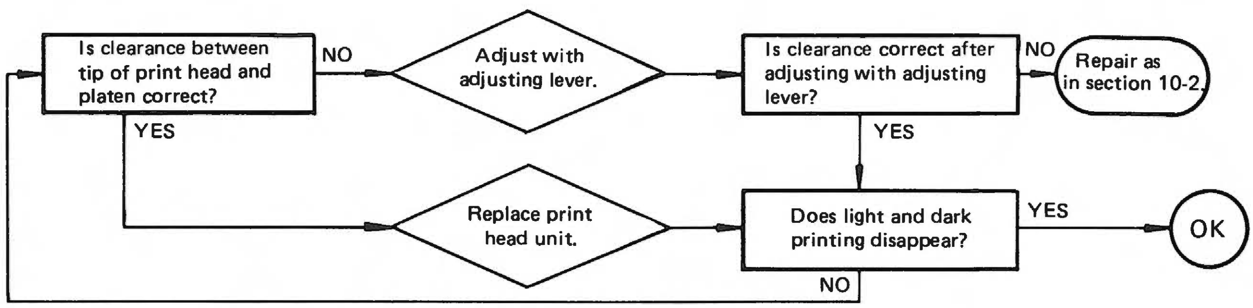
Phenomenon 11. Printing paper is dirtied by ink ribbon.



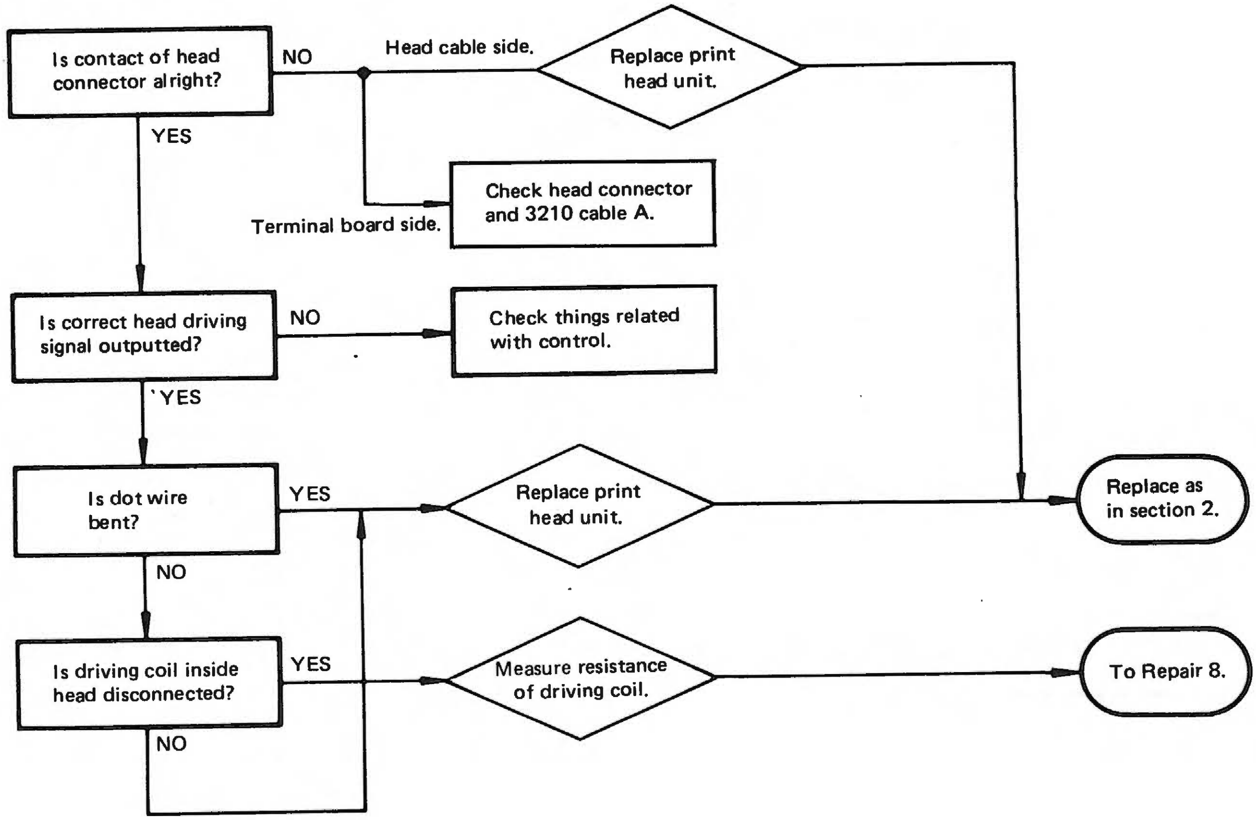
Phenomenon 12. Printing is light.



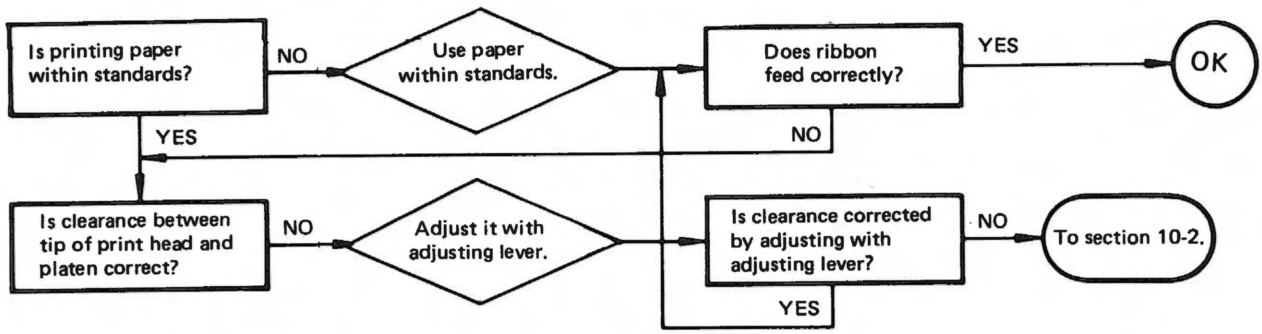
Phenomenon 13. Printing is light and dark.



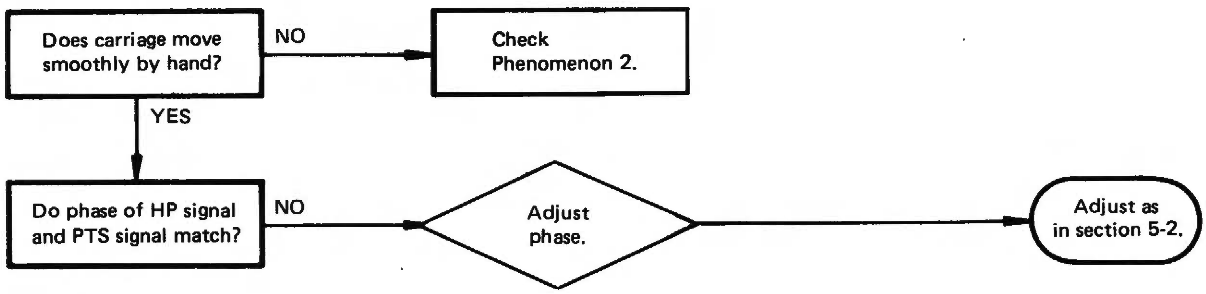
Phenomenon 14. Same dots only are usually (sometimes) omitted.



Phenomenon 15. The ribbon winds but becomes loose.



Phenomenon 16. Go/return time for the carriage varies.



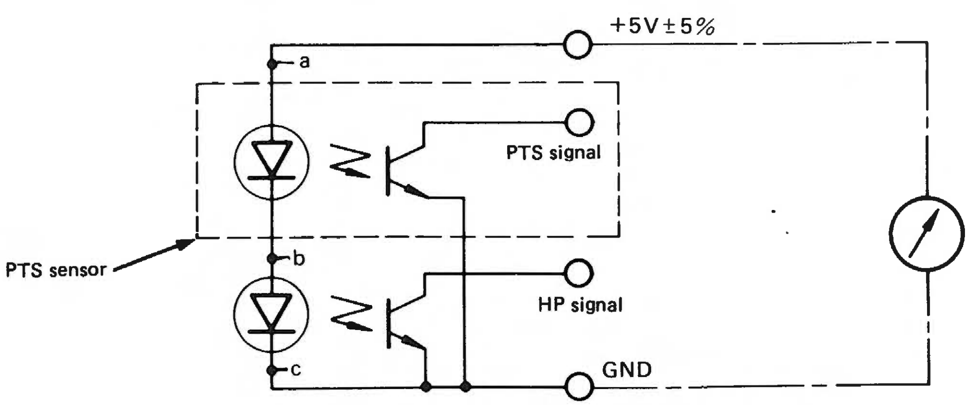
■ **Practical Method of Repair**

Repair 1 PTS signal is bad, HP signal is bad

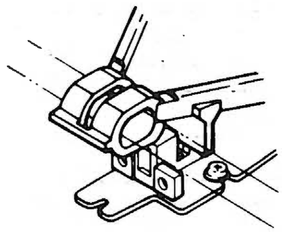
(1) Check points and method

1) Check +5V. [Standard] +5V ±5%

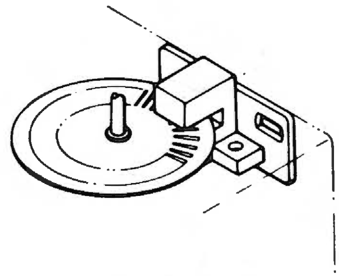
2) Test whether LEDs are normal or not.



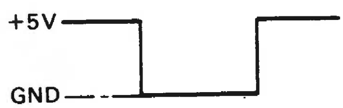
3) Check the waveform output by opening and intercepting the light shaft to the sensor plate.



HP sensor side



PTS sensor side



(2) **Method of Repair**

1) Check the parts related with the +5V power supply.

2) If there is no continuity between a–b, exchange the PTS sensor board assembly.

3) If there is no continuity between b–c, exchange the HP sensor board assembly.

Repair 2 Timing belt does not move

(1) **Check points and method**

1) Check the backlash of the gears on the belt driving pulley and timing belt motor shaft.

2) Check meshing of gears between belt driven pulley, planetary pinion and ribbon driving gear.

(2) **Method of Repair**

1) Adjust the backlash. (Refer to page 32.)

2) If damage, or wear, to the gears, etc. are found, replace the parts and readjust.

Repair 3 Ribbon driving gear does not turn

(1) **Check points and method**

1) When ribbon driving gear does not turn by hand

(a) Check meshing of gears of ribbon driven pulley, planetary pinion and ribbon driving gear.

2) When ribbon driving gear turns when carriage moves either left to right or right to left.

(a) Check meshing of planetary lever assembly and planetary pinion.

(b) Check the reversed revolution of the planetary lever.

(2) **Method of repair**

1), 2): If damage, or wear to the gears, etc. are found, replace the parts and readjust.

Repair 4 Paper feeding path is normal but paper does not feed

(1) **Check Points and Method**

1) Check if the right and left positions of the sprocket wheel are fixed correctly.

2) Check if the paper holding cover is holding the paper correctly.

3) Check if the paper holding cover spring is damaged or fallen off.
4) Check if the sprocket lock lever is securely locked.

(2) Method of repair

1) Correct sprocket wheel positions. (Refer to section 27.)
2), 3), 4): Replace the parts if transformation, wear, etc. are found in any parts.

Repair 5 Paper feed motor gets hot and paper does not feed

(1) Check Points and Method

1) Check the backlash of the gear on the paper feeding motor and the sprocket transmission gear. (Refer to section 32.)

(2) Method of repair

1) If damage, or wear, to the gears, etc. are found, replace the parts and readjust.

Repair 6 Scale does not hold paper correctly.

(1) Check Points and Method

1) Check if scale springs L and R are off and if there is wear, etc.

(2) Method of repair

1) If damage, etc, to scale spring L and R is found, change them.

Repair 7 Paper guide plate A is bad.

(1) Check Points and Method

1) Check if paper guide plate A is twisted and if there is a space between it and the platen.

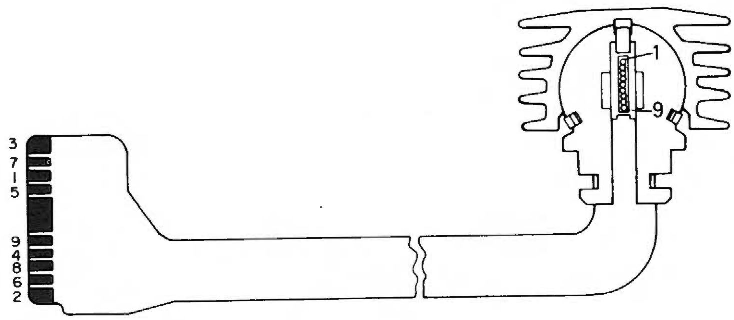
(2) Method of repair

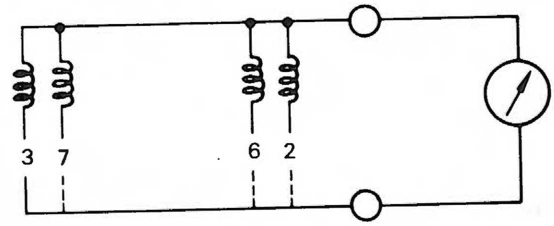
1) If paper guide plate A is deformed or if there is a space between the platen and it, change paper guide plate A.
2) Replacement procedure
   1. Move the carriage to the graducation 80 side of the scale.
   2. Move the scale to the print head unit side.
   3. Remove lock screws (3) of paper guide plate A.
   4. Remove paper guide plate A by lifting it up from the side opposite the carriage.
   5. Put a new paper guide plate A in from the carriage side.
   6. Tighten lock screws (3) for paper guide plate A.

Repair 8 Check abnormalities of print head unit

(1) Check points and Method

1) Measure the DC resistance of the print head unit coil. [Standard] approx. 22Ω/coil





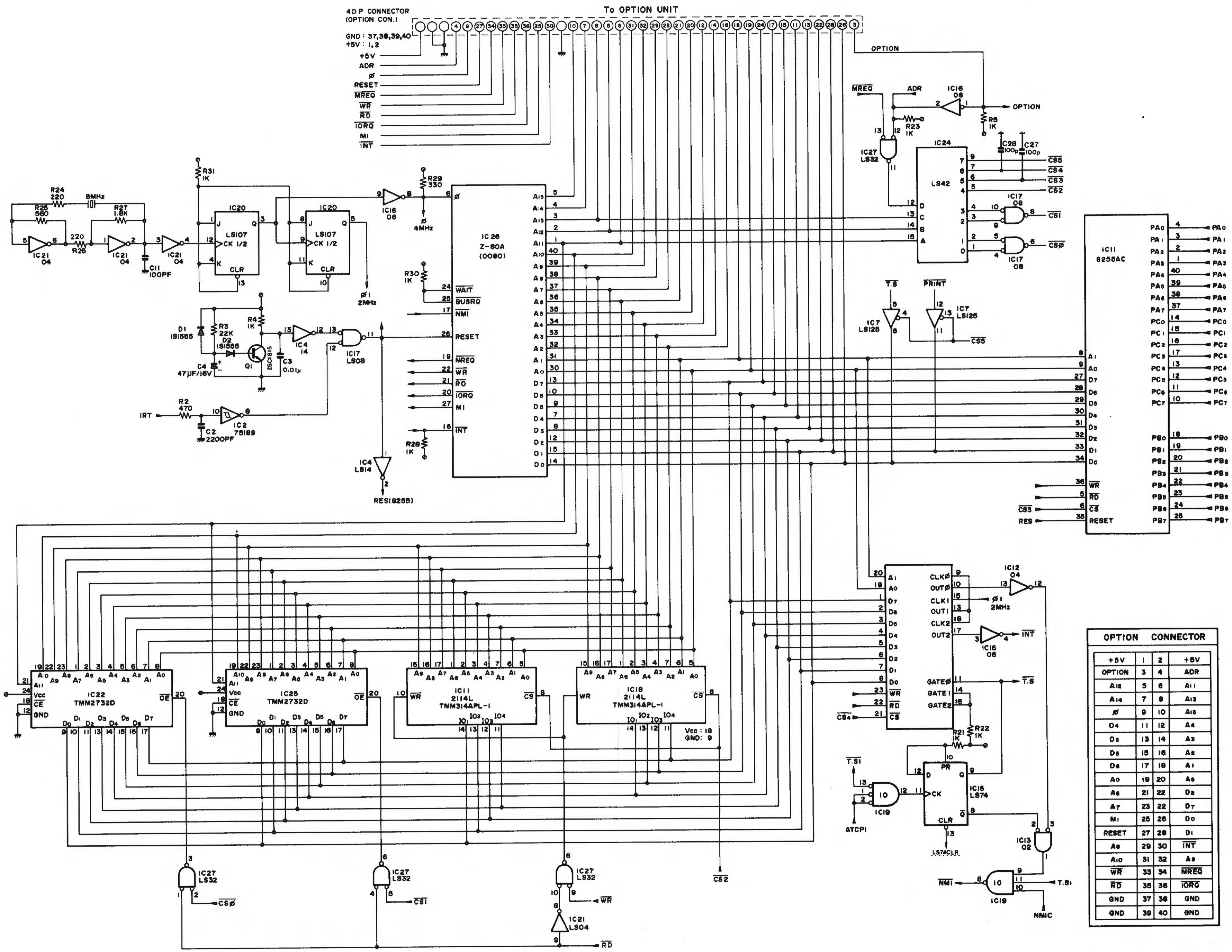
(2) Method of repair

1) If DC resistance of the coil does not indicate standard, change the print head unit.

CIRCUIT DIAGRAM AND PRINTED WIRING BOARD

Notes: The circuit diagram and printed wiring board subject to change without prior notice.

■ CPU Board Circuits (1)

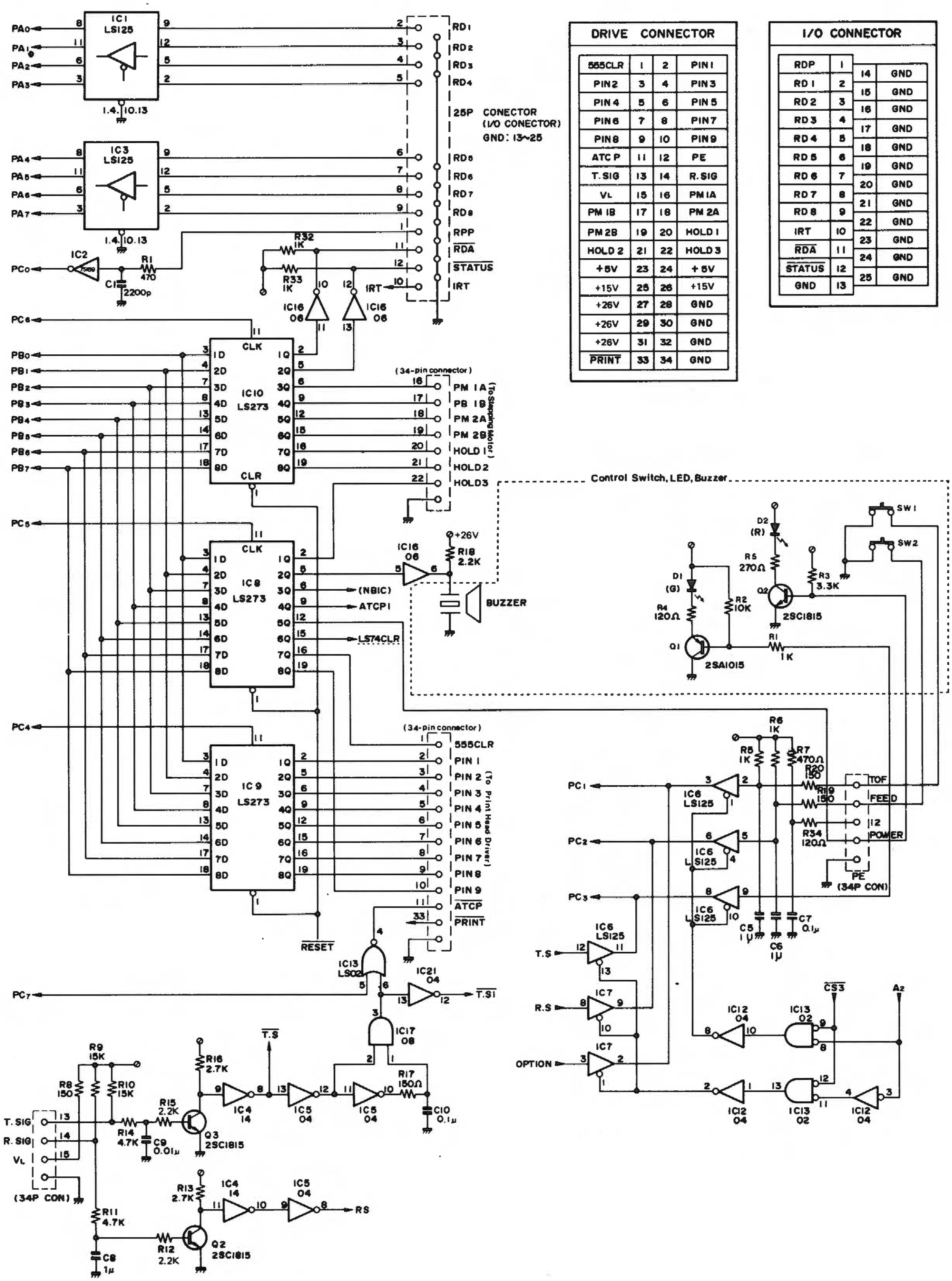


OPTION CONNECTOR			
+5V	1	2	+5V
OPTION	3	4	ADR
A_{12}	5	6	A_{11}
A_{14}	7	8	A_{13}
ø	9	10	A_{15}
D_4	11	12	A_4
D_3	13	14	A_3
D_5	15	16	A_2
D_6	17	18	A_1
A_0	19	20	A_5
A_6	21	22	D_2
A_7	23	22	D_7
M_1	25	26	D_0
RESET	27	28	D_1
A_8	29	30	$\overline{INT}$
A_{10}	31	32	A_9
$\overline{WR}$	33	34	$\overline{MREQ}$
$\overline{RD}$	35	36	$\overline{IORQ}$
GND	37	38	GND
GND	39	40	GND

A B C D E F G H

1

■ CPU Board Circuits (2)



DRIVE CONNECTOR

555CLR	1	2	PIN 1
PIN 2	3	4	PIN 3
PIN 4	5	6	PIN 5
PIN 6	7	8	PIN 7
PIN 8	9	10	PIN 9
ATC P	11	12	PE
T.SIG	13	14	R.SIG
VL	15	16	PM 1A
PM 1B	17	18	PM 2A
PM 2B	19	20	HOLD 1
HOLD 2	21	22	HOLD 3
+5V	23	24	+5V
+15V	25	26	+15V
+26V	27	28	GND
+26V	29	30	GND
+26V	31	32	GND
$\overline{PRINT}$	33	34	GND

I/O CONNECTOR

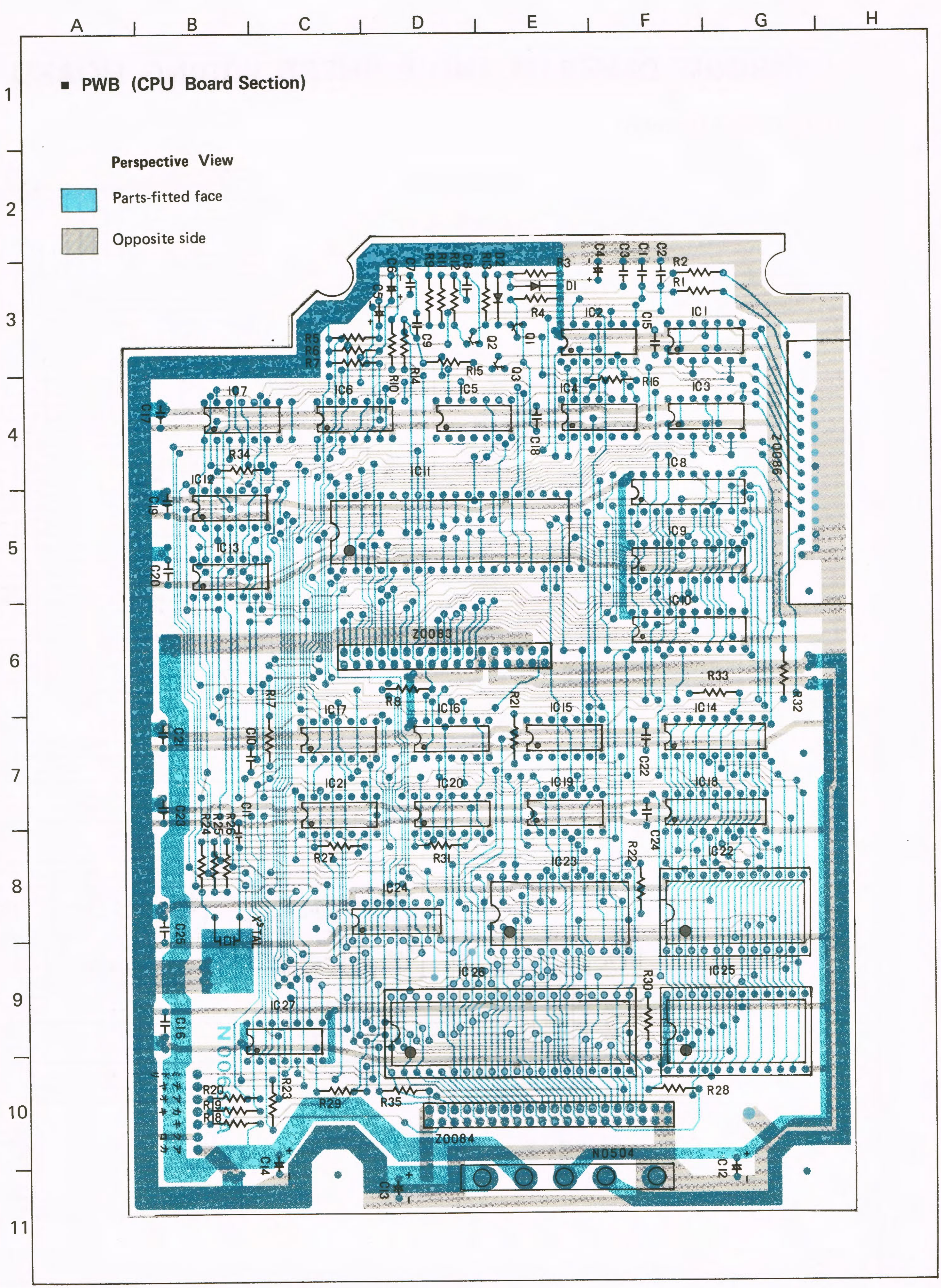
RDP	1	14	GND
RD 1	2	15	GND
RD 2	3	16	GND
RD 3	4	17	GND
RD 4	5	18	GND
RD 5	6	19	GND
RD 6	7	20	GND
RD 7	8	21	GND
RD 8	9	22	GND
IRT	10	23	GND
$\overline{RDA}$	11	24	GND
$\overline{STATUS}$	12	25	GND
GND	13		

■ **PWB (CPU Board Section)**

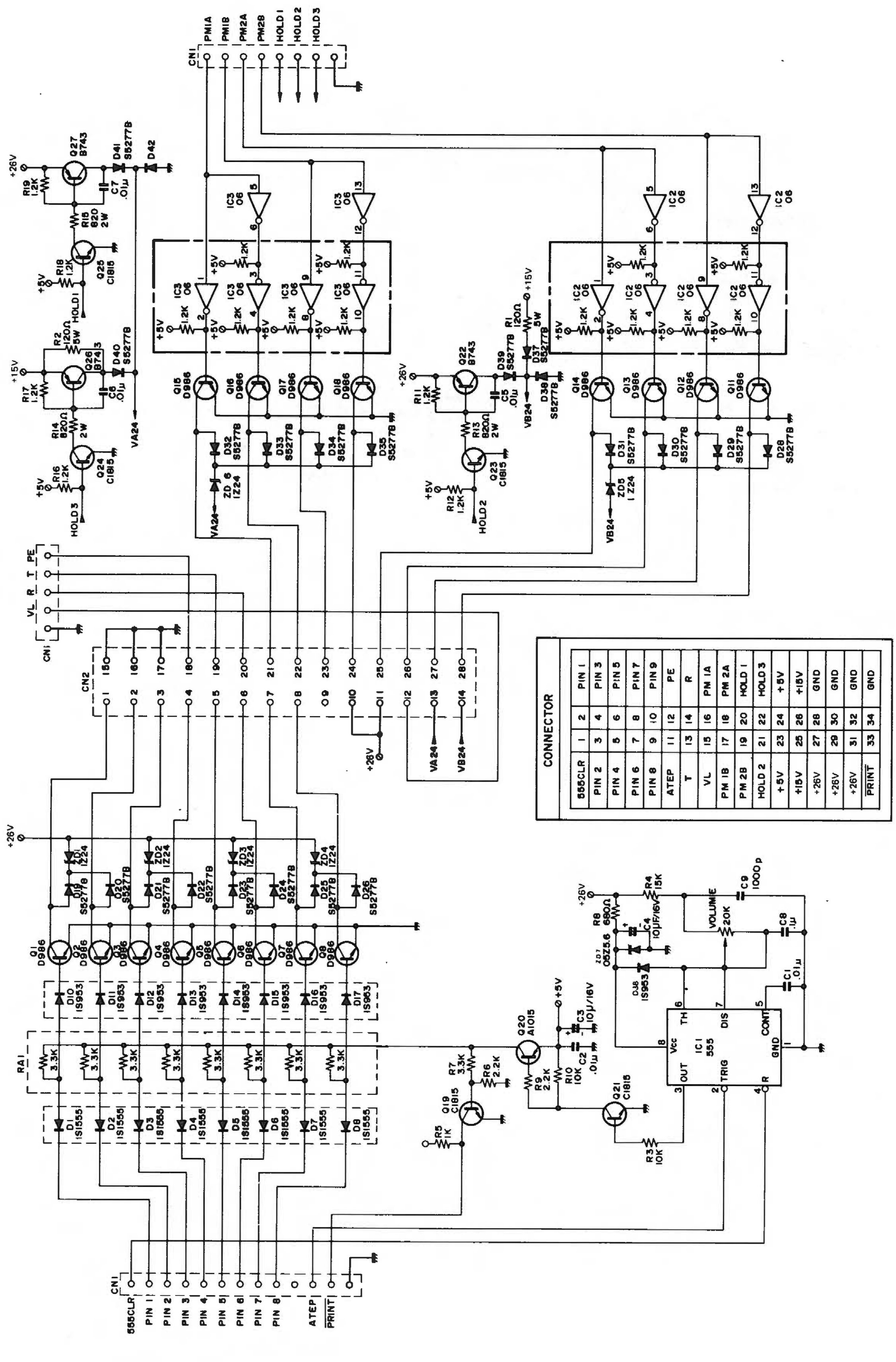
Perspective View

Parts-fitted face

Opposite side



■ Drive PWB Circuits

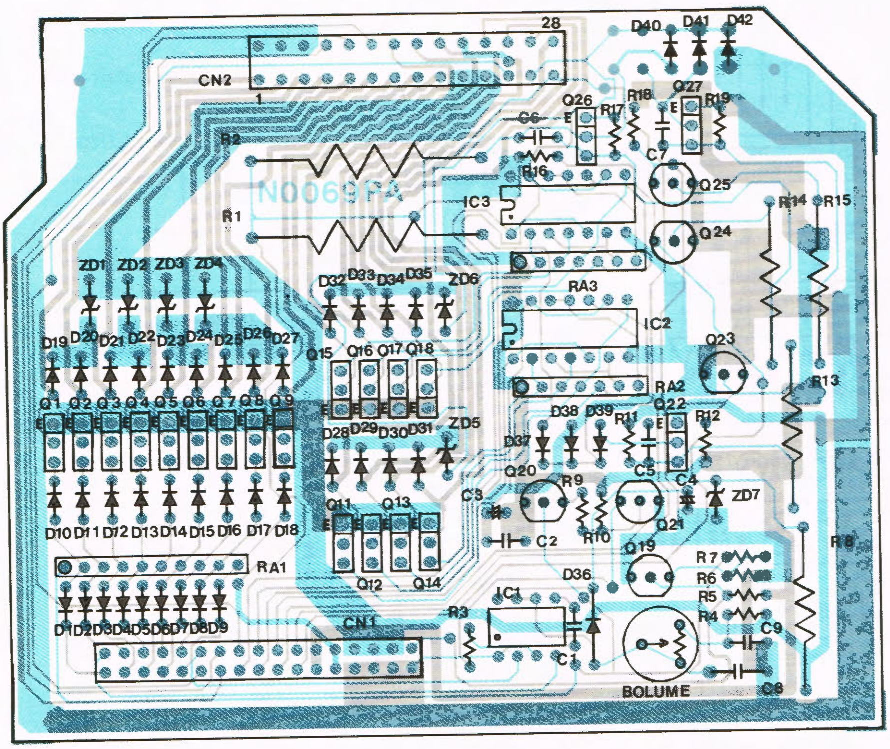


CONNECTOR

555CLR	1	2	PIN 1
PIN 2	3	4	PIN 3
PIN 4	5	6	PIN 5
PIN 6	7	8	PIN 7
PIN 8	9	10	PIN 9
ATEP	11	12	PE
T	13	14	R
VL	15	16	PM 1A
PM 1B	17	18	PM 2A
PM 2B	19	20	HOLD 1
HOLD 2	21	22	HOLD 3
+5V	23	24	+5V
+15V	25	26	+15V
+26V	27	28	GND
+26V	29	30	GND
+26V	31	32	GND
$\overline{PRINT}$	33	34	GND

A B C D E F G H

■ PWB (Drive Board Section)

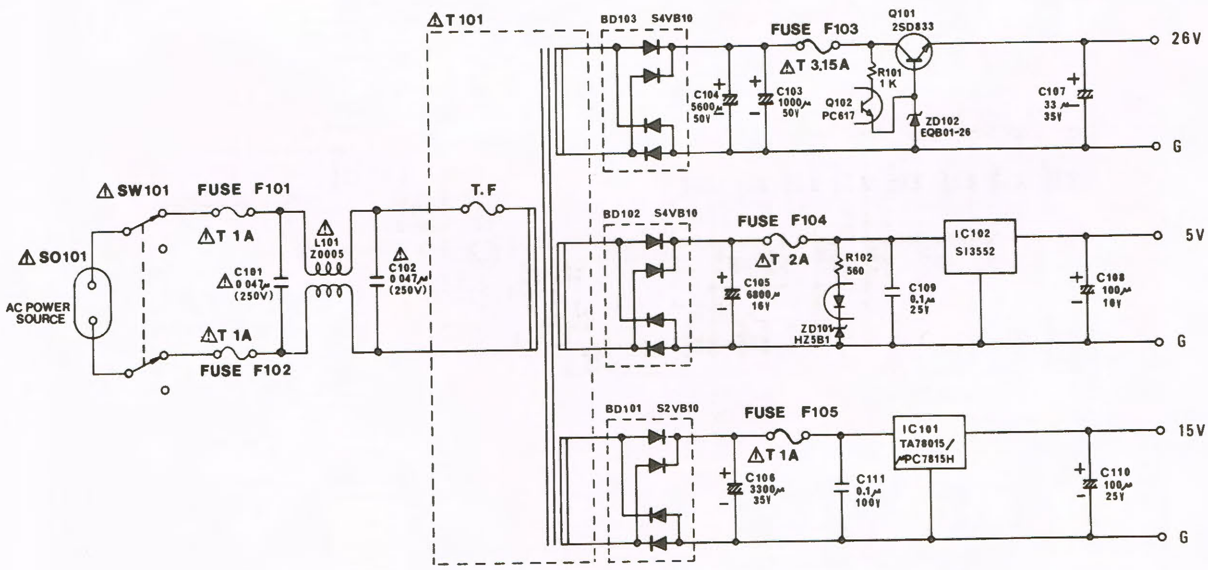


Perspective View

Parts-fitted face

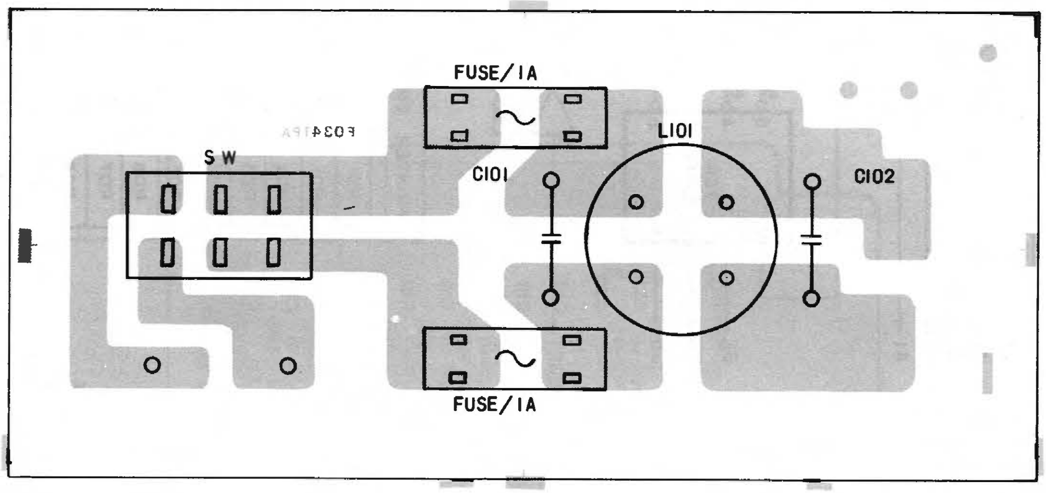
Opposite side

■ Power Supply Circuits

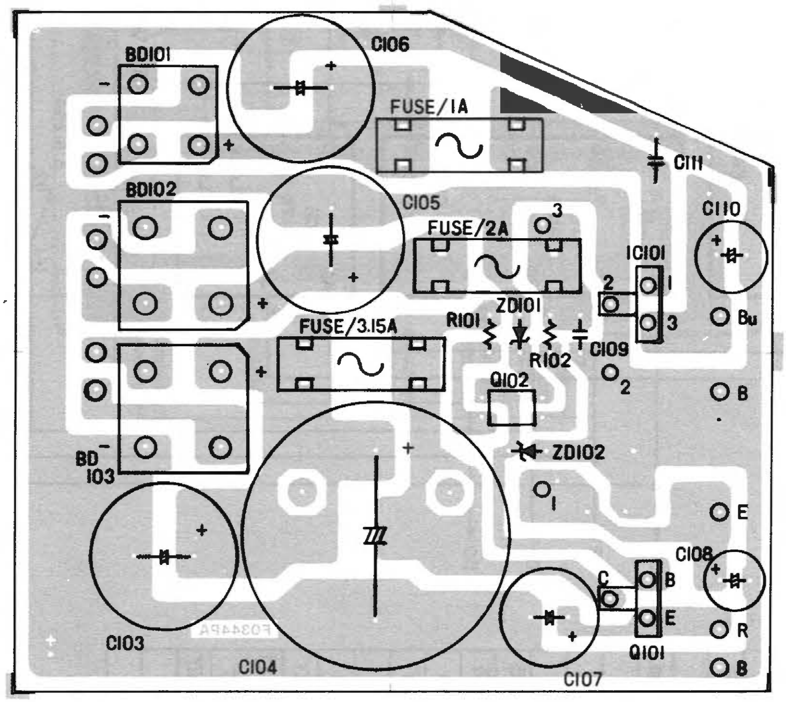


Parts marked with "⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

■ **Printed Wiring Board (Power Supply Section)**

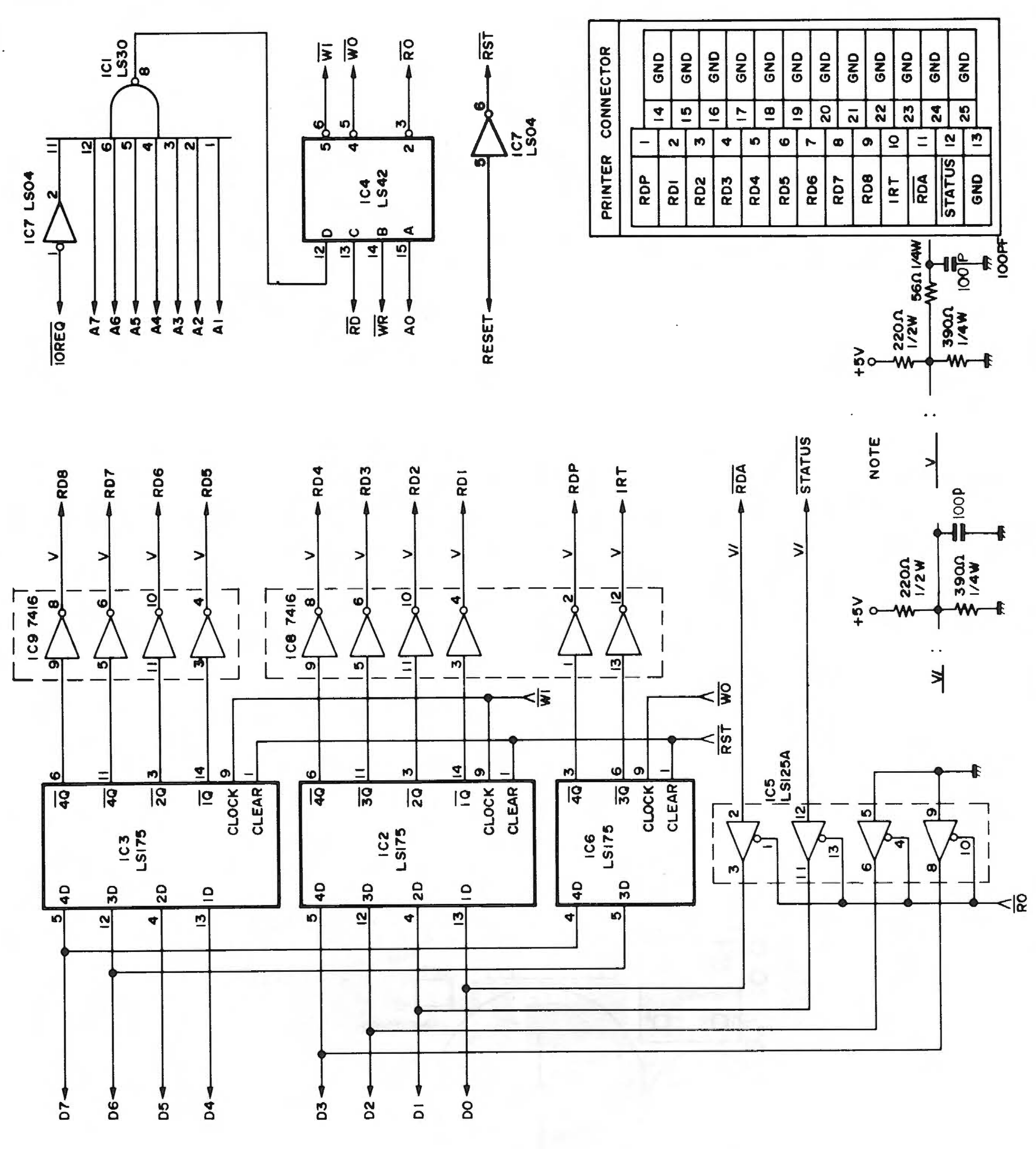


PRIMARY



SECONDARY

■ I/O Card Circuits



PRINTER CONNECTOR

Signal	Pin	Pin	Signal
RDP	1	14	GND
RD1	2	15	GND
RD2	3	16	GND
RD3	4	17	GND
RD4	5	18	GND
RD5	6	19	GND
RD6	7	20	GND
RD7	8	21	GND
RD8	9	22	GND
IRT	10	23	GND
$\overline{\text{RDA}}$	11	24	GND
$\overline{\text{STATUS}}$	12	25	GND
GND	13		

I/O CONNECTOR

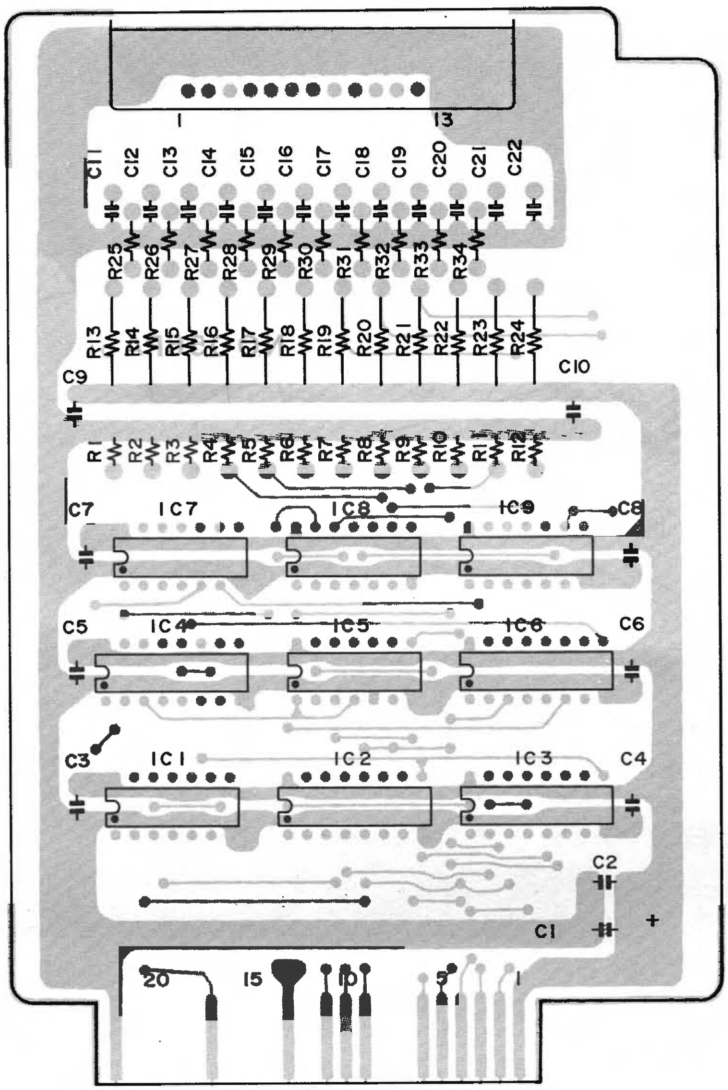
	B	A
1	+5V	+5V
2	D3	D2
3	D4	D1
4	D5	D0
5	D6	GND
6	D7	A15
7	BUSØ	A14
8	$\overline{\text{M1}}$	A13
9	$\overline{\text{WR}}$	A12
10	$\overline{\text{RD}}$	A11
11	$\overline{\text{IOREQ}}$	A10
12	$\overline{\text{MREQ}}$	A9
13	GND	A8
14	$\overline{\text{HALT}}$	A7
15	IEI	A6
16	IEO	A5
17	RESET	A4
18	$\overline{\text{EX RESET}}$	A3
19	$\overline{\text{EX INT}}$	A2
20	$\overline{\text{EX WAIT}}$	A1
21	$\overline{\text{NMI}}$	A0
22	GND	GND

A : PARTS SIDE

I/O CARD for PRINTER

A	B	C	D	E	F	G	H

1 ■ **Printed Wiring Board (I/O Card Section)**



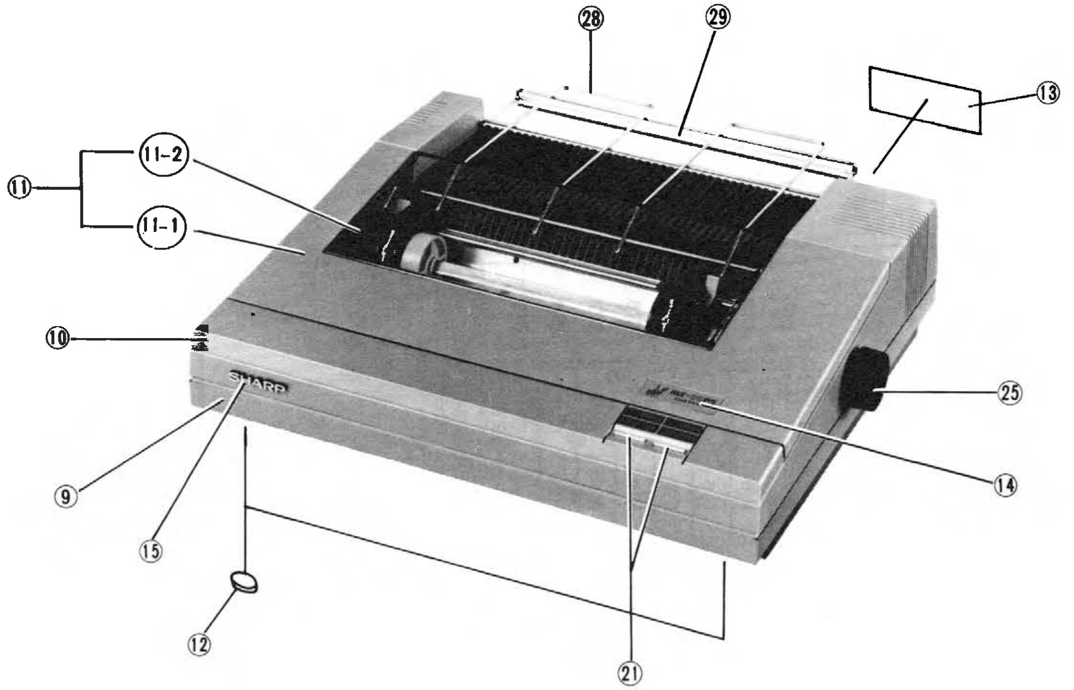
Perspective View

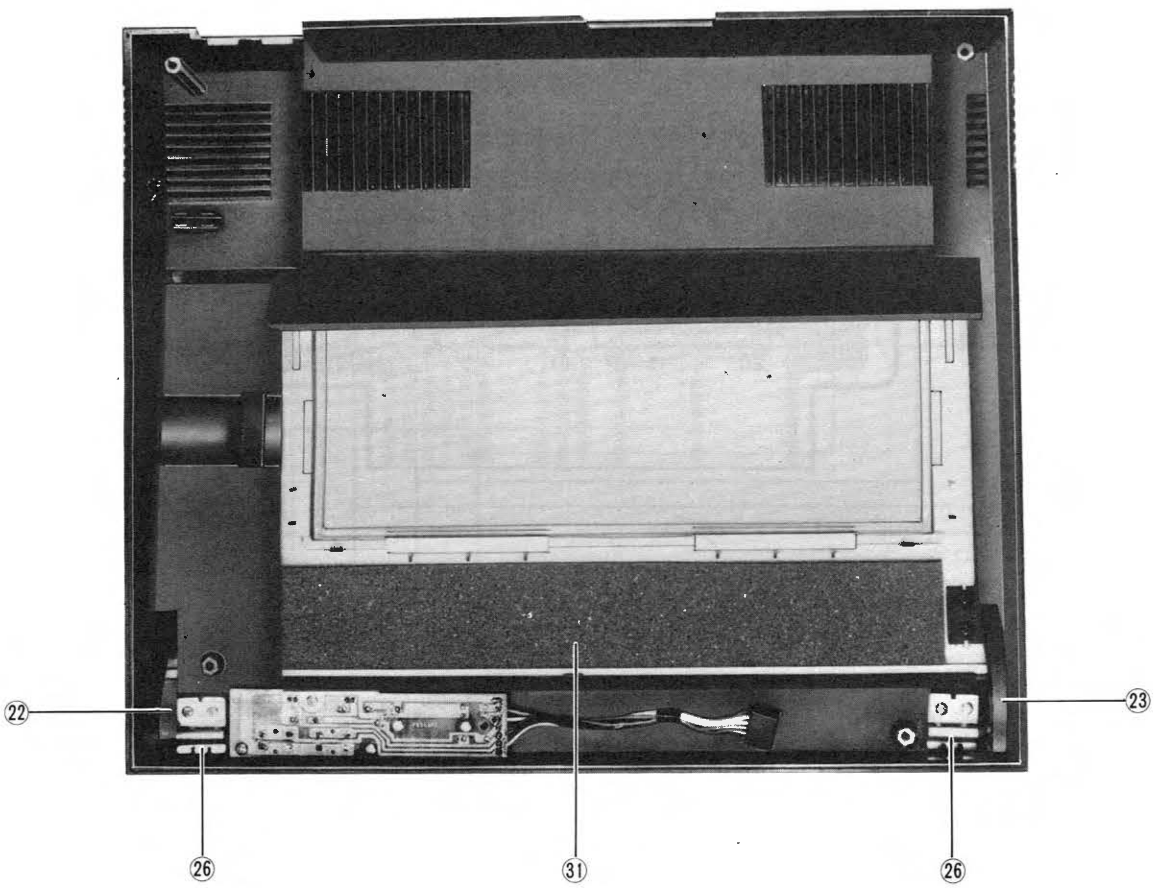
☐ Parts-fitted face

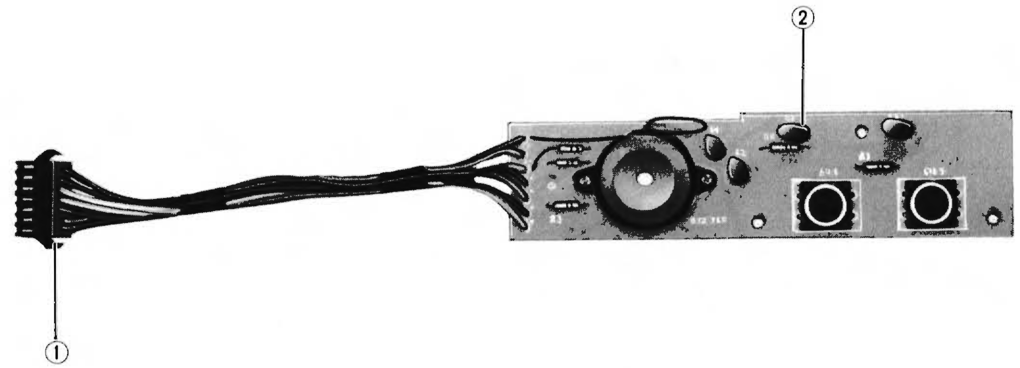
▩ Opposite side

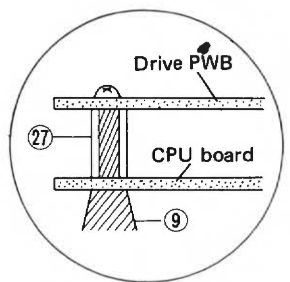
A B C D E F G H

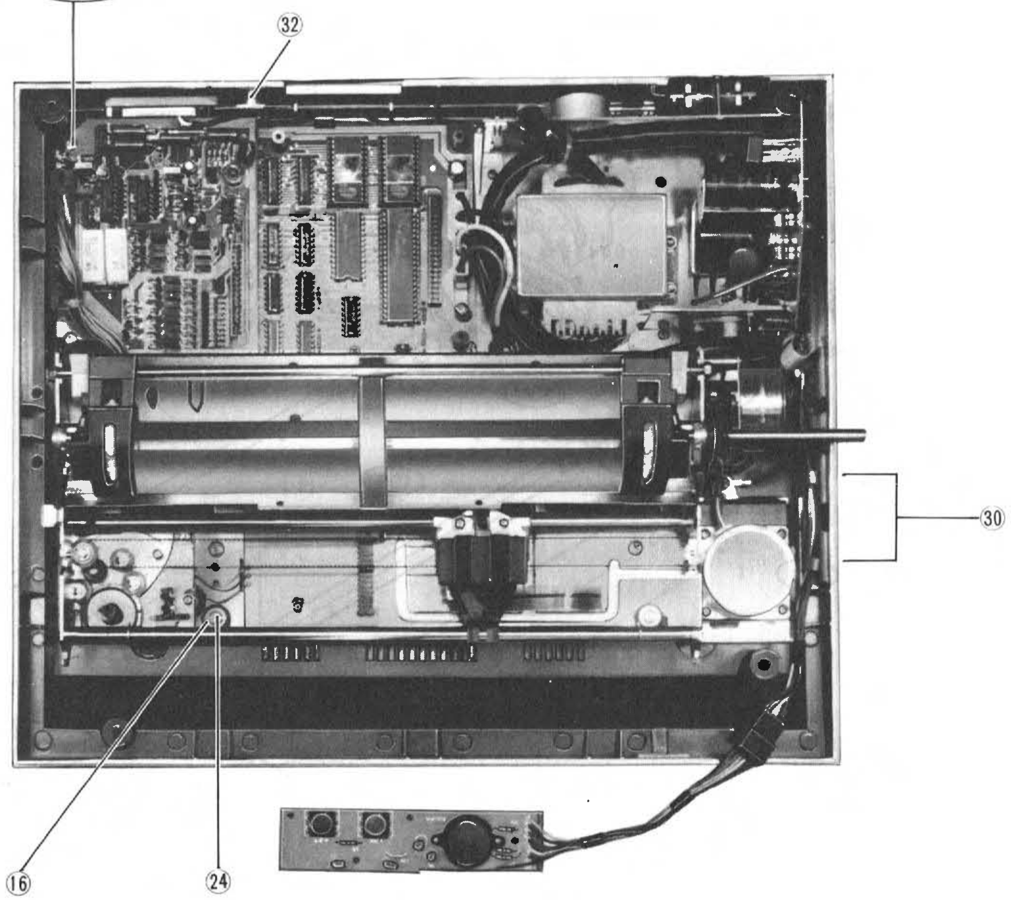
DISASSEMBLED VIEWS



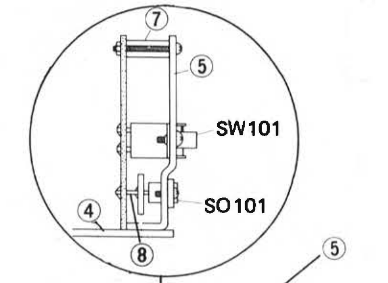


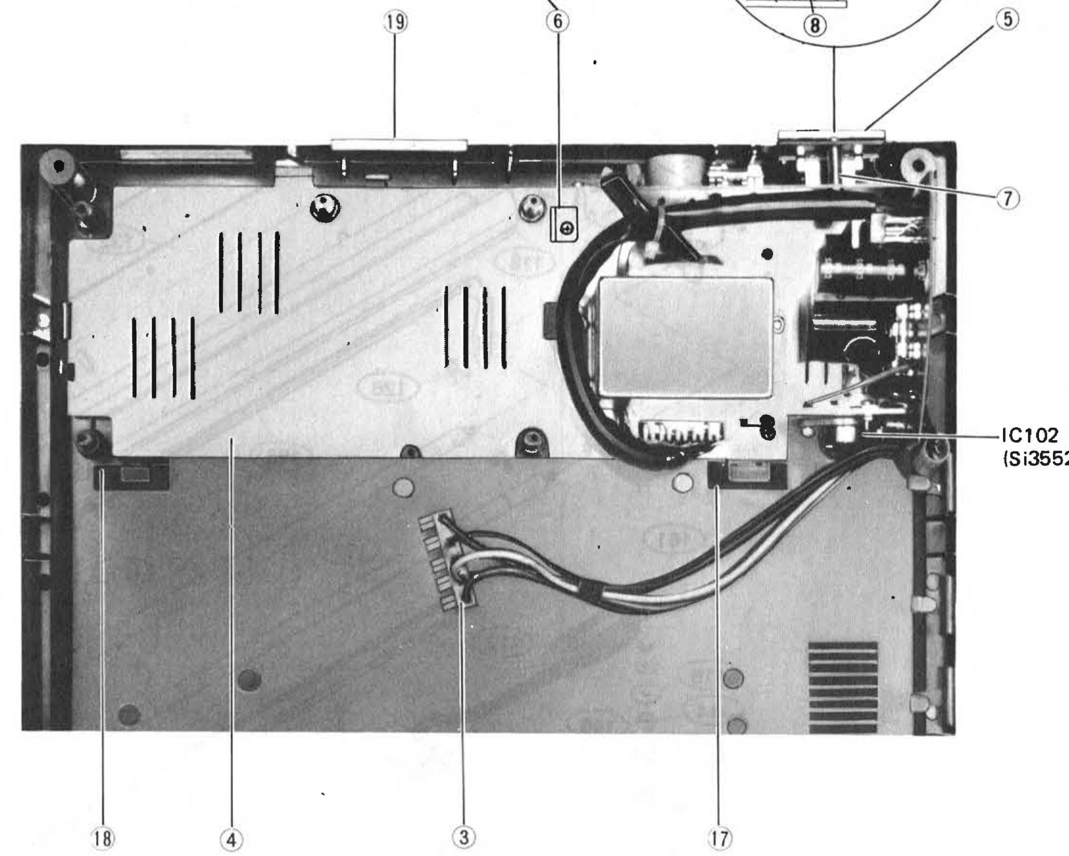


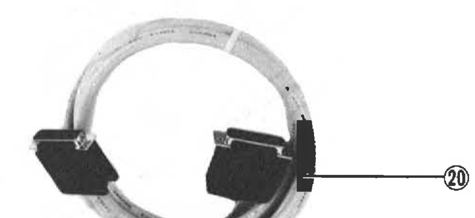




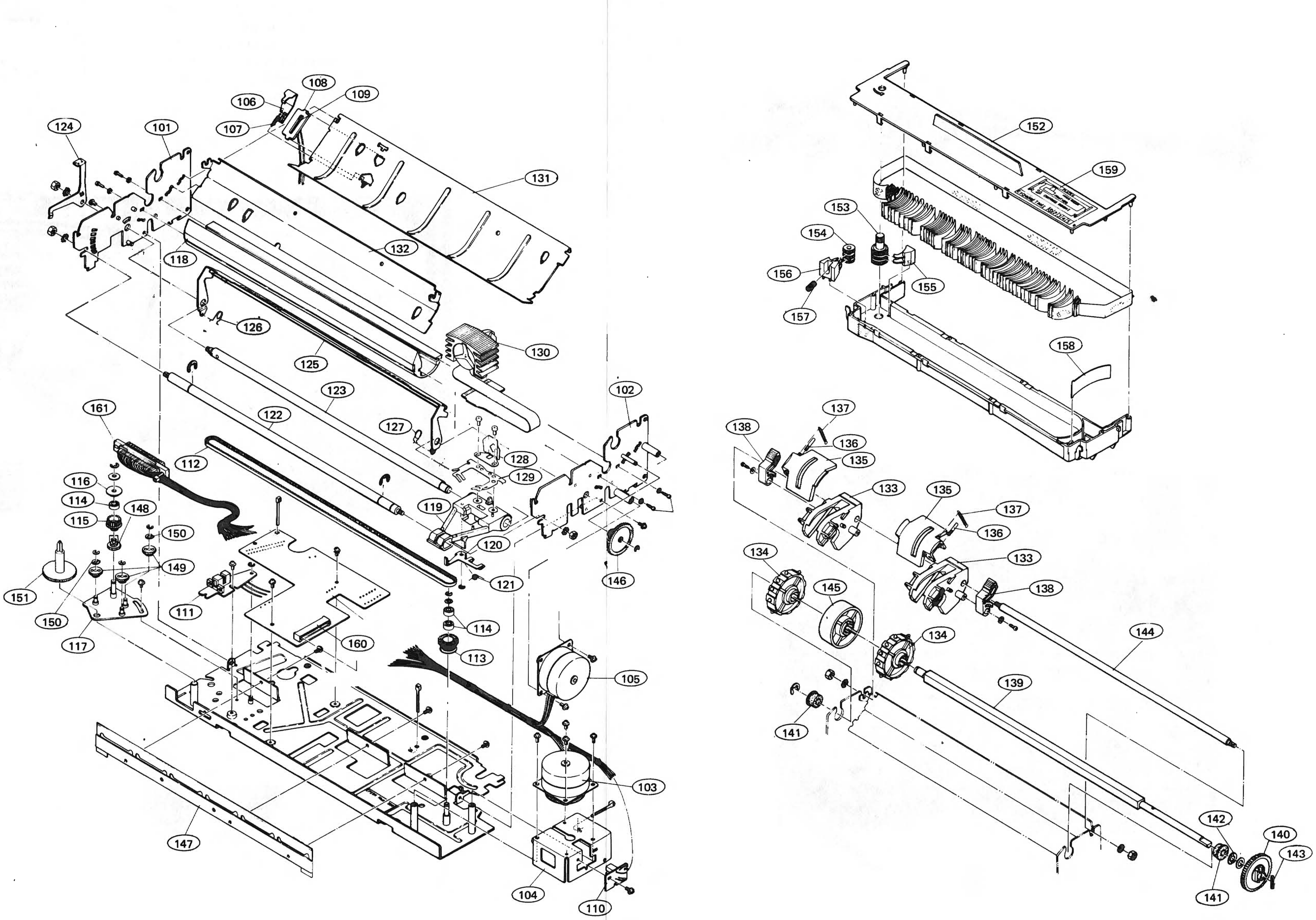
Changed to [PRDAR0043PAZZ] (Sub Radiator) during production. (IC102, Si3552 are attached to Sub Ragiator.)
The secondary lead wire of main transformer will be passed between the transformer and the secondary power board.



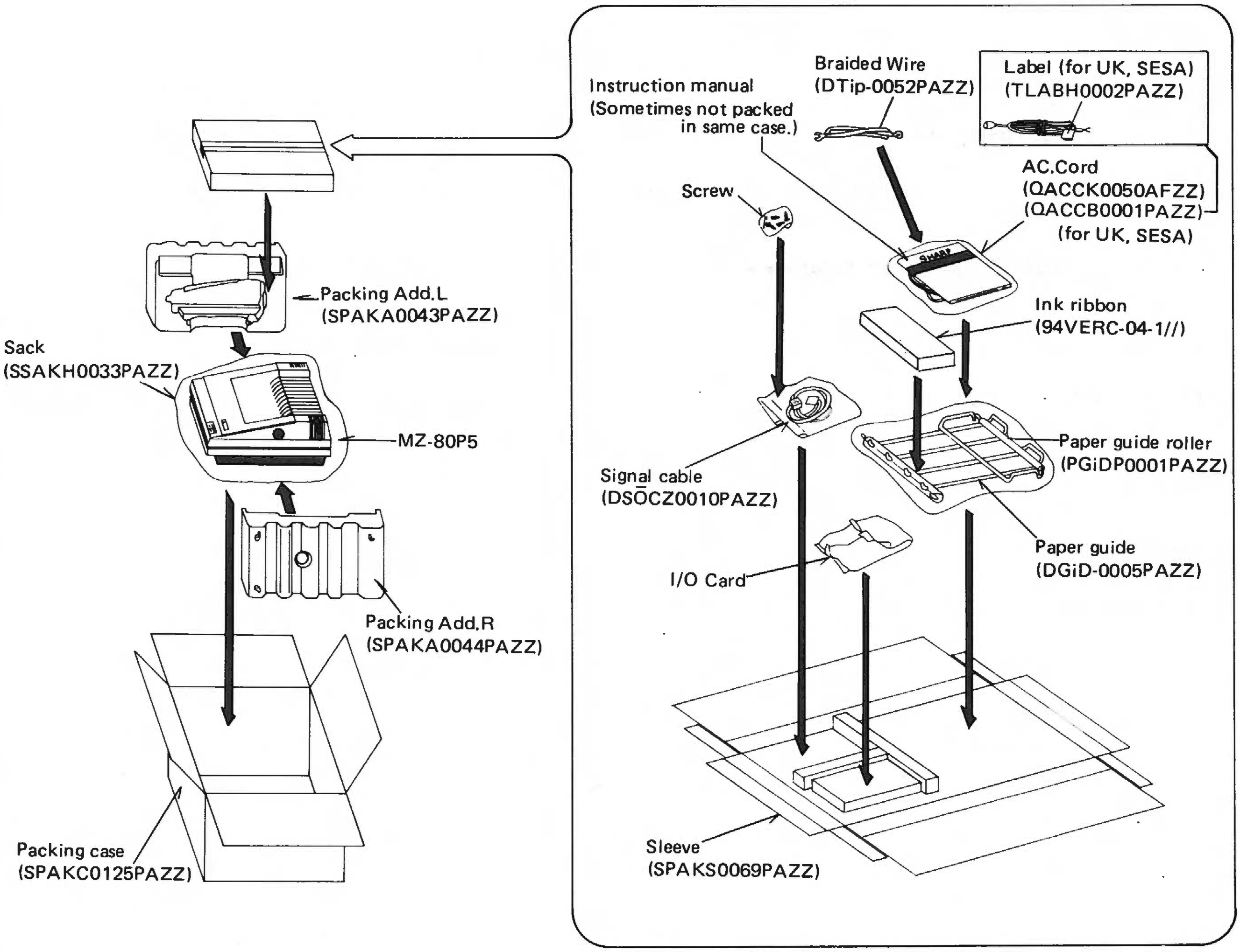




■ **Printer Mechanical**



PACKING METHOD



REPLACEMENT PARTS LIST

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following information.

1. MODEL NAME
2. REF. NO.
3. PART NO.
4. DESCRIPTION

NOTES: Be sure to use regular parts for securing the safety and reliability of the set. Parts marked with " ⚠ " (▭) are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

MODEL MZ-80P5

* * * CPU BOARD UNIT·SECTION * * *

REF. NO.	PART NO.	DESCRIPTION	CODE
	DPWB-0215PAZZ	Assembled CPU Board Unit (Not replacement item)	—

INTEGRATED CIRCUITS

REF. NO.	PART NO.	DESCRIPTION	CODE
IC1, IC3, IC6, IC7	RH-iX0141PAZZ	SN74LS125N	AG
IC2	RH-iX0086PAZZ	SN75189N	AN
IC4	RH-iX0102PAZZ	SN74LS14N	AM
IC5, IC12, IC21	RH-iX0074PAZZ	SN74LS04N	AE
IC8, IC9, IC10	RH-iX0250PAZZ	SN74LS273N	AQ
IC11	RH-iX0136PAZZ	8255AC	BA
IC13	RH-iX0071PAZZ	SN74LS02N	AE
IC14, IC18	RH-iX0226PAZZ	RAM2114L-1	AY
IC15	RH-iX0079PAZZ	SN74LS74N	AG
IC16	RH-iX0038PAZZ	SN7406N	AG
IC17	RH-iX0075PAZZ	SN74LS08N	AE
IC19	RH-iX0076PAZZ	SN74LS10N	AE
IC20	RH-iX0127PAZZ	SN74LS107	AG
IC22	DPROM0008PAZZ	ROM TMM2732	BP
IC23	RH-iX0146PAZZ	8253AC	BC
IC24	RH-iX0104PAZZ	SN74LS42N	AH
IC25	DPROM0009PAZZ	ROM TMM2732	BP
IC26	RH-iX0228PAZZ	CPU Z80A	BG
IC27	RH-iX0078PAZZ	SN74LS32N	AF

TRANSISTORS AND DIODES

REF. NO.	PART NO.	DESCRIPTION	CODE
Q1, Q2, Q3	VS2SC1815//-1	2SC1815	AB
D1, D2	VHD1S1555//1A	1S1555	AA

RESISTORS

REF. NO.	PART NO.	DESCRIPTION	CODE
R1, R2, R7	VRD-SC2EF471J	470 ohm, 1/4W	AA
R3	VRD-SC2EF223J	22 Kohm, 1/4W	AA
R4 ~ R6			
R21 ~ R23, R28, R30 ~ R33, R35	VRD-SC2EF102J	1 Kohm, 1/4W	AA
R8, R17, R19, R20	VRD-SC2EF151J	150 ohm, 1/4W	AA
R9, R10	VRD-SC2EF153J	15K ohm, 1/4W	AA
R11, R14	VRD-SC2EF472J	4.7K ohm, 1/4W	AA
R12, R15, R18	VRD-SC2EF222J	2.2K ohm, 1/4W	AA
R13, R16	VRD-SC2EF272J	2.7K ohm, 1/4W	AA
R24, R26	VRD-SC2EF221J	220 ohm, 1/4W	AA
R25	VRD-SC2EF561J	560 ohm, 1/4W	AA
R27	VRD-SC2EF182J	1.8K ohm, 1/4W	AA
R29	VRD-SC2EF331J	330 ohm, 1/4W	AA
R34	VRD-SC2EF150J	15 ohm, 1/4W	AA

CAPACITORS

REF. NO.	PART NO.	DESCRIPTION	CODE
C1, C2	VCKZPR1HF222P	2,200PF, 50V, Ceramic	AA
C3, C9	VCKZPR1HF103P	0.01MFD, 50V, Ceramic	AA
C4	VCEAAU1CW476Y	47MFD, 16V, Aluminum	AB
C5, C6	VCEAAU1HW105R	1 MFD, 50V, Aluminum	AB
C7, C10, C15 ~ C25	VCTYPU1BD104Z	0.1MFD, 12V, Ceramic	AB
C8	VCSACU1VE105K	1MFD, 35V, Tantalume	AC
C11	VCCCPR1H3101J	100PF, 50V, Ceramic	AA
C12	VCEAAU1EW107M	100MFD, 25V, Aluminum	AB
C13	VCEAAU1AW107M	100MFD, 10V, Aluminum	AB

MISCELLANEOUS

REF. NO.	PART NO.	DESCRIPTION	CODE
X'TAL	RCRSA0009PAZZ	Crystal, 8 MHz	AN
Z0086	QPLGZ0086PAZZ	25-Pin Terminal	BF
Z0083	QPLGZ0083PAZZ	34-Pin Terminal	AS

MODEL MZ-80P5 PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	CODE
Z0084	QPLGZ0084PAZZ	40-Pin Terminal	AT
	DSŌCN0138PAZZ	Lead Wire with 7-Pin Socket	AH
N0504	QPLGN0504CEZZ	5-Pin Terminal	AB
	QSŌCZ0010PAZZ	24-Pin IC Socket	AF
	QSŌCZ0012PAZZ	40-Pin IC Socket	AH

* * * DRIVE PWB UNIT SECTION * * *

REF. NO.	PART NO.	DESCRIPTION	CODE
	DPWB-0216PAZZ	Assembled Drive PWB Unit (Not replacement item)	—

INTEGRATED CIRCUITS

REF. NO.	PART NO.	DESCRIPTION	CODE
IC1	RH-iX0134PAZZ	NE555	AG
IC2, IC3	RH-iX0038PAZZ	SN7406N	AG

TRANSISTORS

REF. NO.	PART NO.	DESCRIPTION	CODE
Q1 ~ Q8, Q11 ~ Q18	VS2SD986///-1	2SD986	AF
Q19, Q21, Q23 ~ Q25	VS2SC1815//-1	2SC1815	AB
Q20	VS2SA1015//-1	2SA1015	AC
Q22, Q26, Q27	VS2SB743///-1	2SB743	AE

DIODES

REF. NO.	PART NO.	DESCRIPTION	CODE
D1 ~ D8	VHD1S1555//1A	1S1555	AA
D10 ~ D17, D36	VHD1S953///-1	1S953	AB
D19 ~ D26, D28 ~ D35, D37 ~ D42	RH-DX8402YAZZ	S5277B	AB
ZD1 ~ ZD6	VHD-1Z24///-1	1Z24, Zener	AD
ZD7	VHD05Z5R6U/-1	05Z5.6L/U, Zener	AB

RESISTORS

REF. NO.	PART NO.	DESCRIPTION	CODE
R1, R2	VRW-KT3HD121J	120 ohm, 5W	AC
R3, R10	VRD-RU2EE103J	10K ohm, 1/4W	AA
R4	VRD-RU2EE153J	15K ohm, 1/4W	AA
R5	VRD-RU2EE102J	1K ohm, 1/4W	AA
R6, R9	VRD-RU2EE222J	2.2K ohm, 1/4W	AA
R7	VRD-RU2EE332J	3.3K ohm, 1/4W	AA
R8	VRS-PT3DB681J	680 ohm, 2W	AB
R11, R12, R16 ~ R19	VRD-RU2EE122J	1.2K ohm, 1/4W	AA
R13 ~ R15	VRS-PT3DB821J	820 ohm, 2W	AB
RA1	RR-KZ0060PAZZ	Resistor Arry 3.3K ohm x 9	AD
RA2, RA3	RR-KZ0061PAZZ	Resistor Arry 1.2K ohm x 6	AC
VO-LUME	RVR-M0038PAZZ	Variable Resistor, 22K ohm	AE

CAPACITORS

REF. NO.	PART NO.	DESCRIPTION	CODE
C1, C2, C5 ~ C7	VCKZPR1HF103P	0.01MFD, 50V, Ceramic	AA
C3, C4	VCEAAU1CW106Y	10MFD, 16V, Aluminum	AB
C8	VCQYKU1HM104K	0.1MFD, 50V, Film	AB
C9	VCKZPU1HF102P	0.001MFD, 50V, Ceramic	AA

MISCELLANEOUS

REF. NO.	PART NO.	DESCRIPTION	CODE
CN1	QSŌCZ0023PAZZ	34-Pin Socket	AX
CN2	QSŌCZ0017PAZZ	28-Pin Socket	AL

* * * SWITCH PWB UNIT SECTION * * *

REF. NO.	PART NO.	DESCRIPTION	CODE
	DPWB-0217PAZZ	Assembled Switch PWB Unit (Not replacement item)	—

TRANSISTORS AND DIODES

REF. NO.	PART NO.	DESCRIPTION	CODE
Q1	VS2SA1015//-1	2SA1015	AC
Q2	VS2SC1815//-1	2SC1815	AB
D1	RH-PX0047PAZZ	LED (Green)	AD
D2	RH-PX0033PAZZ	LED (Red)	AD

RESISTORS

REF. NO.	PART NO.	DESCRIPTION	CODE
R1	VRD-SC2EF102J	1K ohm, 1/4W	AA
R2	VRD-SC2EF103J	10K ohm, 1/4W	AA
R3	VRD-SC2EF332J	3.3K ohm, 1/4W	AA
R4	VRD-SC2EF121J	120 ohm, 1/4W	AA
R5	VRD-SC2EF271J	270 ohm, 1/4W	AA

MISCELLANEOUS

REF. NO.	PART NO.	DESCRIPTION	CODE
SW1, SW2	QSW-P0010PAZZ	Top of Form, Line Feed Switch	AD

MODEL MZ-80P5 PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	CODE
BUZZER	PALMB0003PAZZ	Buzzer	AH
1	DSŌCN0139PAZZ	Lead Wire with 7-Pin Socket	AG
2	PSPAK0006PAZZ	LED Spacer	AA

* * * POWER SUPPLY UNIT SECTION * * *

REF. NO.	PART NO.	DESCRIPTION	CODE
	DBŌXD0017PAZZ	Assembled Power Supply Unit (Not replacement item)	—
	DBŌXD0027PAZZ	Assembled Power Supply Unit (Not replacement item) (for UK)	—

INTEGRATED CIRCUITS

REF. NO.	PART NO.	DESCRIPTION	CODE
IC101	RH-iX0268PAZZ	TA78015, 15V-Regulator	AK
IC102	RH-iX0269PAZZ	Si3552, 5V-Regulator	AV

TRANSISTORS AND DIODES

REF. NO.	PART NO.	DESCRIPTION	CODE
Q101	VS2SD833///-1	2SD833	AL
Q102	RH-PX2001YAZZ	PC617 Photo-coupler	AK
BD101	VHDS2VB10//-1	S2VB10, Bridge Diode	AG
BD102, BD103	VHDS4VB10//-F	S4VB10, Bridge Diode	AK
ZD101	VHE05Z6R8Z/1A	05Z6R8Z, Zener Diode	AB
ZD102	VHEEQB0126/-1	EQB01-26, Zener Diode	AD

RESISTORS

REF. NO.	PART NO.	DESCRIPTION	CODE
R101	VRD-RU2EE102J	1K ohm, 1/4W	AA
R102	VRD-RU2EE561J	560 ohm, 1/4W	AA

CAPACITORS

REF. NO.	PART NO.	DESCRIPTION	CODE
△ C101, △ C102	RC-CZ0180PAZZ	0.047MFD, 250V, Line Capacitor	[redacted]
C103	VCEAAU1HM108M	1,000MFD, 50V, Aluminum	AF
C104	VCEAAQ1HC568Y	5,600MFD, 50V, Aluminum	AP
C105	VCEAAU1CM688M	6,800MFD, 16V, Aluminum	AG
C106	VCEAAU1VM338M	3,300MFD, 35V, Aluminum	AG
C107	VCEAAU1VW336M	33MFD, 35V, Aluminum	AC
C108	VCEAAU1AW107M	100MFD, 10V, Aluminum	AB
C109	VCTYPU1ED104Z	0.1MFD, 25V, Ceramic	AB
C110	VCEAAU1EM107M	100MFD, 25V, Aluminum	AB
C111	RC-QZ0003PAZZ	0.1MFD, 100V, Film	AB

MISCELLANEOUS

REF. NO.	PART NO.	DESCRIPTION	CODE
△ T101	RTRNP0048PAZZ	Power Supply Transformer, 220V	[redacted]
△ T101	RTRNP0056PAZZ	Power Supply Transformer (for UK) 240V	
△ L101	RTRNZ0005PAZZ	Line Coil	
△ F101, △ F102, △ F105	QFS-C0005PAZZ	Fuse, T1A	
△ F103	QFS-C0004PAZZ	Fuse, T3. 15A	
△ F104	QFS-C2002TAZZ	Fuse, T2A	
△ SW101	QSW-C0003PAZZ	A.C Switch	
△ SŌ101	QSŌCA0003PAZZ	Appliance Inlet	
3	DSŌCN0125PAZZ	Lead Wire with 5-pin Socket	AG
4	PRDAR0034PAZZ	Radiator	AW
	QFSHA0001PAZZ	Fuse Holder	AA

REF. NO.	PART NO.	DESCRIPTION	CODE
5	LANGK0325PAZZ	Switch Fixing Metal	AE
6	LANGK0326PAZZ	PWB Fixing Metal	AC
	⇩Changed during production.		
6	PRDAR0043PAZZ	Sub Radiator	AG
7	PSPAN0005VAZZ	PWB Fixing Spacer	AA
8	QLUGP0005PAZZ	Appliance Inlet Joint Pin	AA

* * * OTHER SECTION * * *

REF. NO.	PART NO.	DESCRIPTION	CODE
9	GCABA8207PASA	Cabinet A (bottom)	BF
10	GCABB8207PASA	Cabinet B (upper)	BK
11	DCABC8207PASA	Cover Assy	AU
11-1	GCŌVA0005PASA	Cover	AQ
11-2	GCŌVA0006PASA	Transparent Cover	AM
12	PGUMS1010PASA	Foot	AC
△ 13	TSPCE0015PAZZ	Specification Panel (for SEEG, SESA)	AE
△ 13	TSPCE0021PAZZ	Specification Panel (for UK)	AE
14	HBDGD0004PASA	Badge	AD
15	HBDGB1002CES/	SHARP Badge	AC
16	PGUMZ0002PAZZ	Rubber (A)	AB
17	PGUMZ0003PAZZ	" (B)	AC
18	PGUMZ0004PAZZ	" (C)	AC
19	GCOVA0007PASA	Connector Cover	AG
20	DSŌCZ0010PAZZ	Signal Cable	BP
21	DBTN-0002PASA	Top of Form, Line Feed Switch Button Assy	AM
22	LSTYM0009PAZZ	Hinge (Right)	AE
23	LSTYM0010PAZZ	Hinge (Left)	AE
24	LX-BZ0076PAZZ	Screw	AC
25	DKNB-0002PASA	Knob with Spring	AG
26	LFiX-0009PAZZ	Hinge (R) (L) Fixing Metal	AB
27	LSTYP0001PAZZ	Stay for CPU Board	AB
28	DGiD-0005PAZZ	Paper Guide	AX
29	PGiDP0001PAZZ	Paper Guide Roller	AG
	DTiP-0052PAZZ	Braided Wire	AT
30	LBNDC0001PAZZ	Cord Keeper	AC
31	PKYU-0001PAZZ	Sound-deadening Material	AG
32	LX-BZ0079PAZZ	Frame Ground Terminal	AG
△	QACCK0050AFZZ	A.C. Cord	AQ
△	QACCB0001PAZZ	A.C. Cord (for UK, SESA)	AQ
△	TLABH0002PAZZ	Label for A.C. Cord (for UK, SESA)	AC
	94VERC-04-1//	Ink Ribbon (with Cartridge Case)	BB
	94VER-04-1///	Ink Ribbon (Non Cartridge Case)	AX
	TiNSE0021PAZZ	Instruction Manual (English)	AY

* * * I/O CARD UNIT SECTION * * *

INTEGRATED CIRCUITS

REF. NO.	PART NO.	DESCRIPTION	CODE
IC1	RH-iX0077PAZZ	SN74LS30N	AE
IC2, IC3, IC6	RH-iX0181PAZZ	SN74LS175N	AM
IC5	RH-iX0141PAZZ	SN74LS125N	AK
IC4	RH-iX0104PAZZ	SN74LS42N	AH
IC7	RH-iX0074PAZZ	SN74LS04N	AE
IC8, IC9	RH-iX0013PAZZ	SN7416N	AF

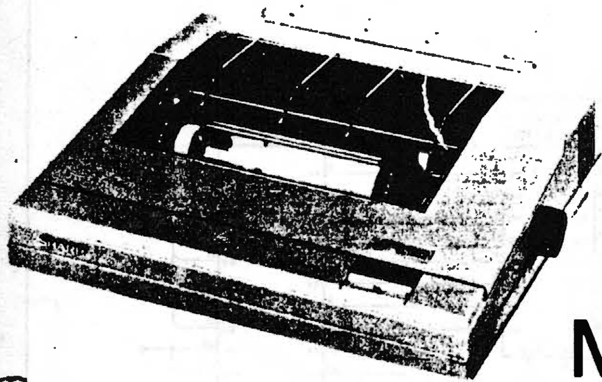
MODEL MZ-80P5 PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	CODE
RESISTORS			
R1 ~ R12	VRD-RU2EE391J	390 ohm, 1/4W	AA
R13 ~ R24	VRD-ST2HF221J	220 ohm, 1/2W	AA
R25 ~ R34	VRD-RU2EE560J	56 ohm, 1/4W	AA
CAPACITOR			
C1	VCEAAU1CW107Y	100MFD, 16V, Aluminum	AB
C2 ~ C10	VCTYPU1BD104Z	0.1MFD, 12V, Ceramic	AB
C11 ~ C22	VCCCPR1H3101J	100PF, 50V, Ceramic	AA
MISCELLANEOUS			
	QPLGZ0086PAZZ	25-Pin Terminal	BF
	LANGK0297PAZZ	25-Pin Terminal Fixing Metal	AG
*** **PRINTER MECHANICAL UNIT SECTION** ***			
101	94VF303002000	Frame LA	AZ
102	94VF303003000	Frame RA	BA
103	94VF303027000	Timing Belt Motor Assy	BV
104	94VF303026010	Motor Heat Sinker	AR
105	94VF303031000	Paper Feeding Motor Assy	BU
106	94VF303008000	Paper Senser Lever	AN
107	94VF303007020	Paper Senser Lever Spring	AE
108	94VF303009010	Senser Board	AK
109	94VA170202501	Reed Switch	AK
110	94VF303029000	PTS Sensor Board Assy	BD
111	94VF303030000	Home Position Sensor Assy	BE
112	94VF303014010	Timing Belt	BB
113	94VF303017000	Belt Driving Pulley	AH
114	94VB210151490	Ball Bearing	AY
115	94VF303018010	Belt Driven Pulley	AH
116	94VF303018020	Belt Driven Pulley Flange	AE
117	94VF303019000	Belt Tension Plate	AT
118	94VF303004000	Platen A	BK
119	94VF303006000	Carriage Assy A	AZ
120	94VF303005010	Head Lock Lever	AK
121	94VF303005020	Head Lock Lever Spring	AC
122	94VF303001010	Carriage Shaft A	BD
123	94VF303001020	Carriage Shaft B	BK
124	94VF303001030	Adjusting Lever	AN
125	94VF303001050	Scale	AX
126	94VF303001060	Scale Spring L	AF
127	94VF303001070	Scale Spring R	AF
128	94VF303001092	Ribbon Mask	AL
129	94VF303001100	Head Sitting Plate	AH
130	94VF401100000	Print Head Unit	BU
131	94VF303007010	Outer Paper Guide	BA
132	94VF303001040	Inner Paper Guide	AY
133	94VF303011010	Sprocket Frame	AX
134	94VF303011020	Sprocket Wheel	AR
135	94VF303011030	Paper Holding Cover	AQ
136	94VF303011060	G-Pin	AC
137	94VF303011040	Paper Holding Cover Spring	AD
138	94VF303011050	Sprocket Lock Lever	AL
139	94VF303013010	Sprocket Shaft	BF
140	94VF303013020	Sprocket Gear	AK
141	94VC601302050	Plane Bearing	AE
142	94VB101251490	Leaf Spring (6–0.15–11)	AB
143	94VB130103216	Spring Pin (ϕ2x14)	AB
144	94VF303010010	Sprocket Guide Shaft	AQ
145	94VF303010020	Paper Guide Roller	AT
146	94VF303001080	Sprocket Transmission Gear	AK
147	94VF303021001	Paper Guide Plate A	AZ
148	94VF303020000	Planetary Lever Assy	AN
149	94VF303020020	Planetary Pinion	AG
150	94VB101252190	Leaf Spring (3–0.07–6)	AC
151	94VF303014020	Ribbon Driving Gear	AN
152	94VF303352010	Cartridge Case Lid	AX
153	94VF303352030	Ribbon Feeding Knob	AK
154	94VF303352040	Ribbon Pressure Roller	AK
155	94VF303352050	Ribbon Separator A	AK
156	94VF303352060	Ribbon Separator B	AK
157	94VF303352070	Ribbon Feeding Spring	AE
158	94VF303352080	Ribbon Braking Spring	AE
159	94VF303352090	Ribbon Label	AH
160	94VA260112001	Head Connector	AP
161	94VF303025000	3210 Cable A	BL

MZ-80P5G/H/S
A810220KS
Printed in Japan

SHARP SERVICE MANUAL

CODE: 00ZMZ80P5111J



Dot Printer

MODEL MZ-80P5 (LATE)

SUPPLEMENT

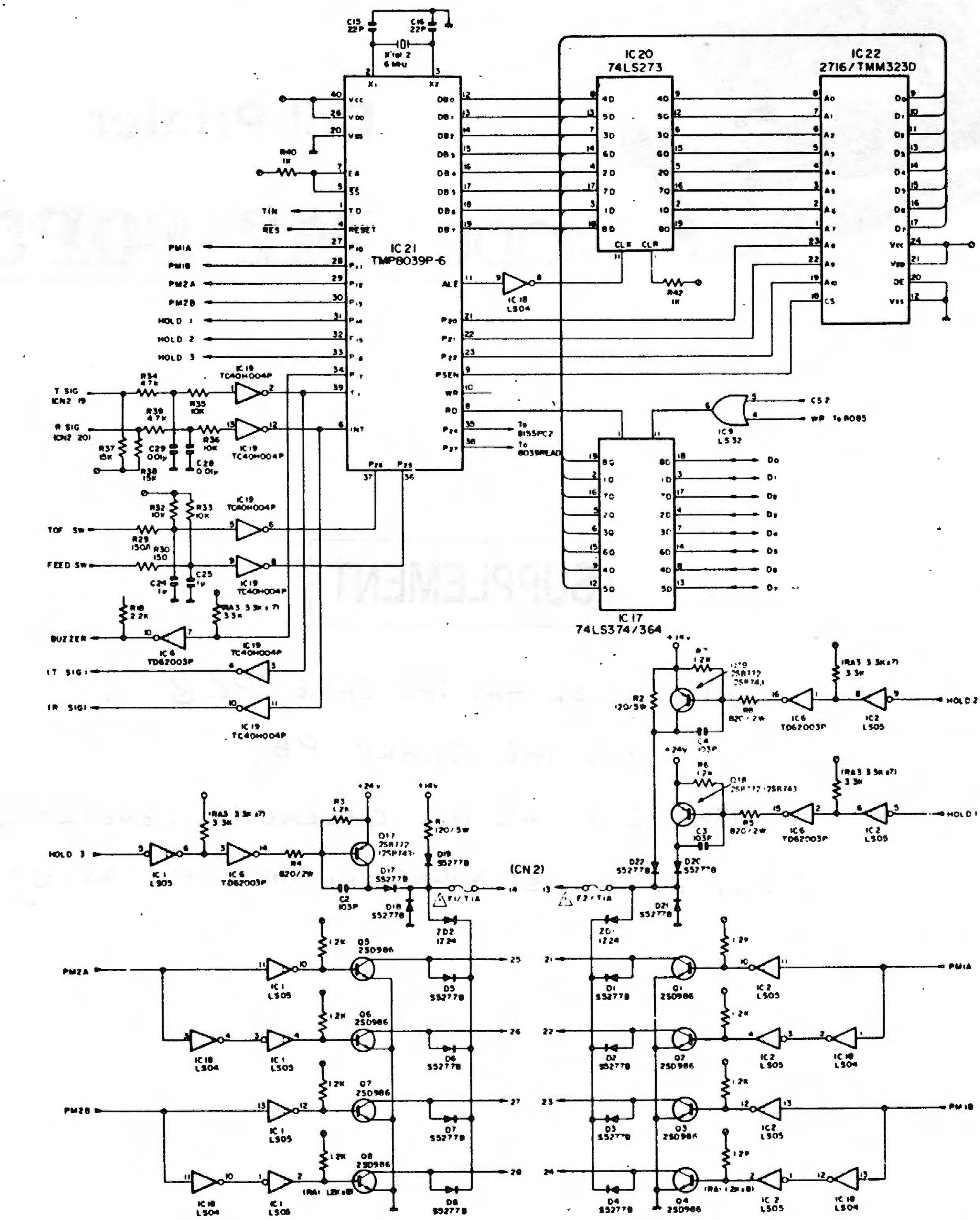
THIS MODEL HAS THE SAME PCB
AS THE SHARP P6,
WITH IC16 AS THE CHARACTER GENERATOR ROM
(AND ALL CHIPS ALIGNED ON THE LONG AXIS)

SHARP CORPORATION

CIRCUIT DIAGRAM AND PRINTED WIRING BOARD

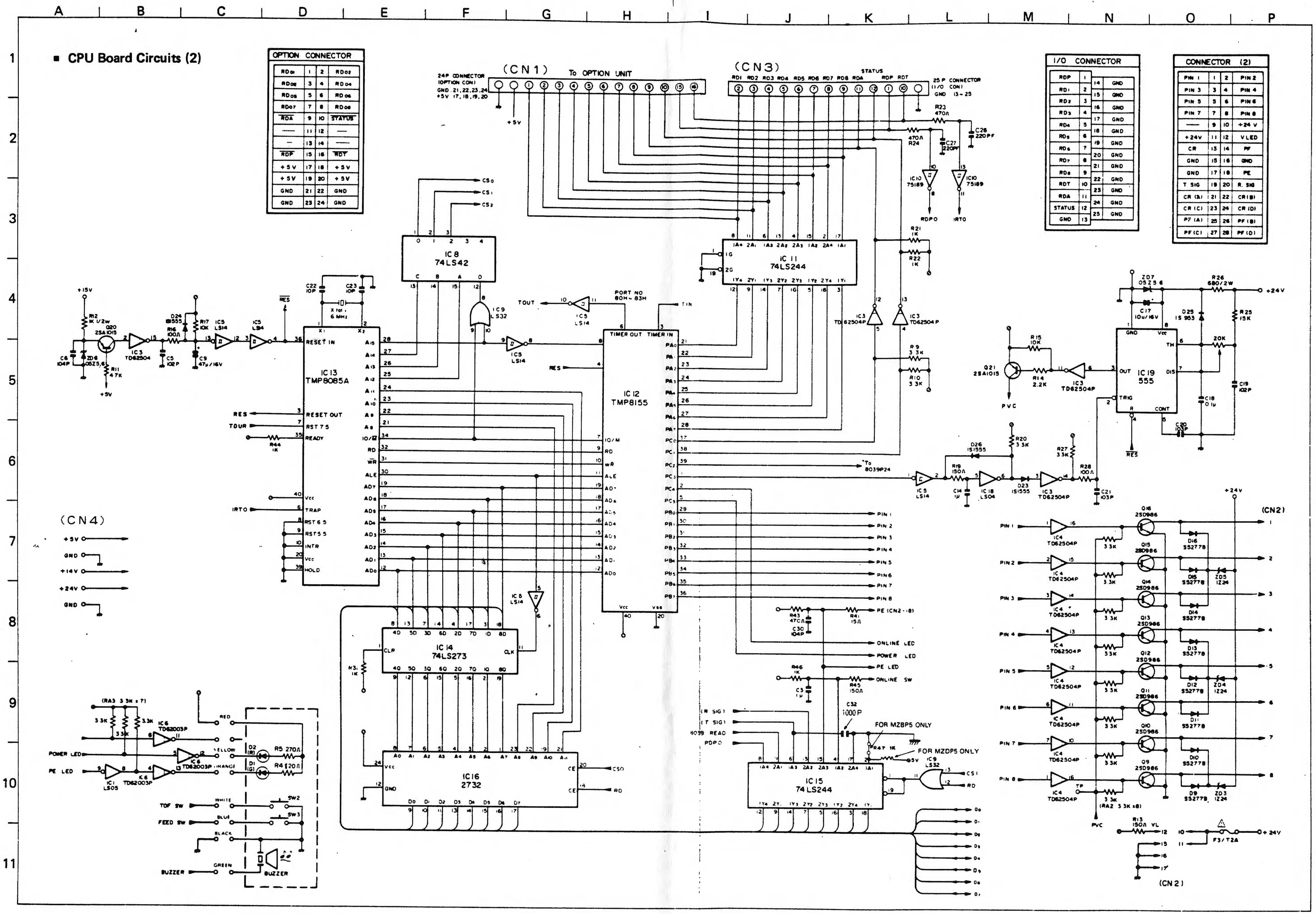
Notes: The circuit diagram and printed wiring board subject change without prior notice.

■ CPU Board Circuits (1)



Parts marked with " ⚠ " are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

■ CPU Board Circuits (2)



OPTION CONNECTOR			
RD01	1	2	RD02
RD03	3	4	RD04
RD05	5	6	RD06
RD07	7	8	RD08
RDA	9	10	STATUS
—	11	12	—
—	13	14	—
RDP	15	16	RDY
+5V	17	18	+5V
+5V	19	20	+5V
GND	21	22	GND
GND	23	24	GND

I/O CONNECTOR			
RDP	1	14	GND
RD1	2	15	GND
RD2	3	16	GND
RD3	4	17	GND
RD4	5	18	GND
RD5	6	19	GND
RD6	7	20	GND
RD7	8	21	GND
RD8	9	22	GND
RDT	10	23	GND
RDA	11	24	GND
STATUS	12	25	GND
GND	13		

CONNECTOR (2)			
PIN 1	1	2	PIN 2
PIN 3	3	4	PIN 4
PIN 5	5	6	PIN 6
PIN 7	7	8	PIN 8
—	9	10	+24 V
+24V	11	12	VLED
CR	13	14	PF
GND	15	16	GND
GND	17	18	PE
T SIG	19	20	R. SIG
CR (A)	21	22	CR (B)
CR (C)	23	24	CR (D)
PF (A)	25	26	PF (B)
PF (C)	27	28	PF (D)

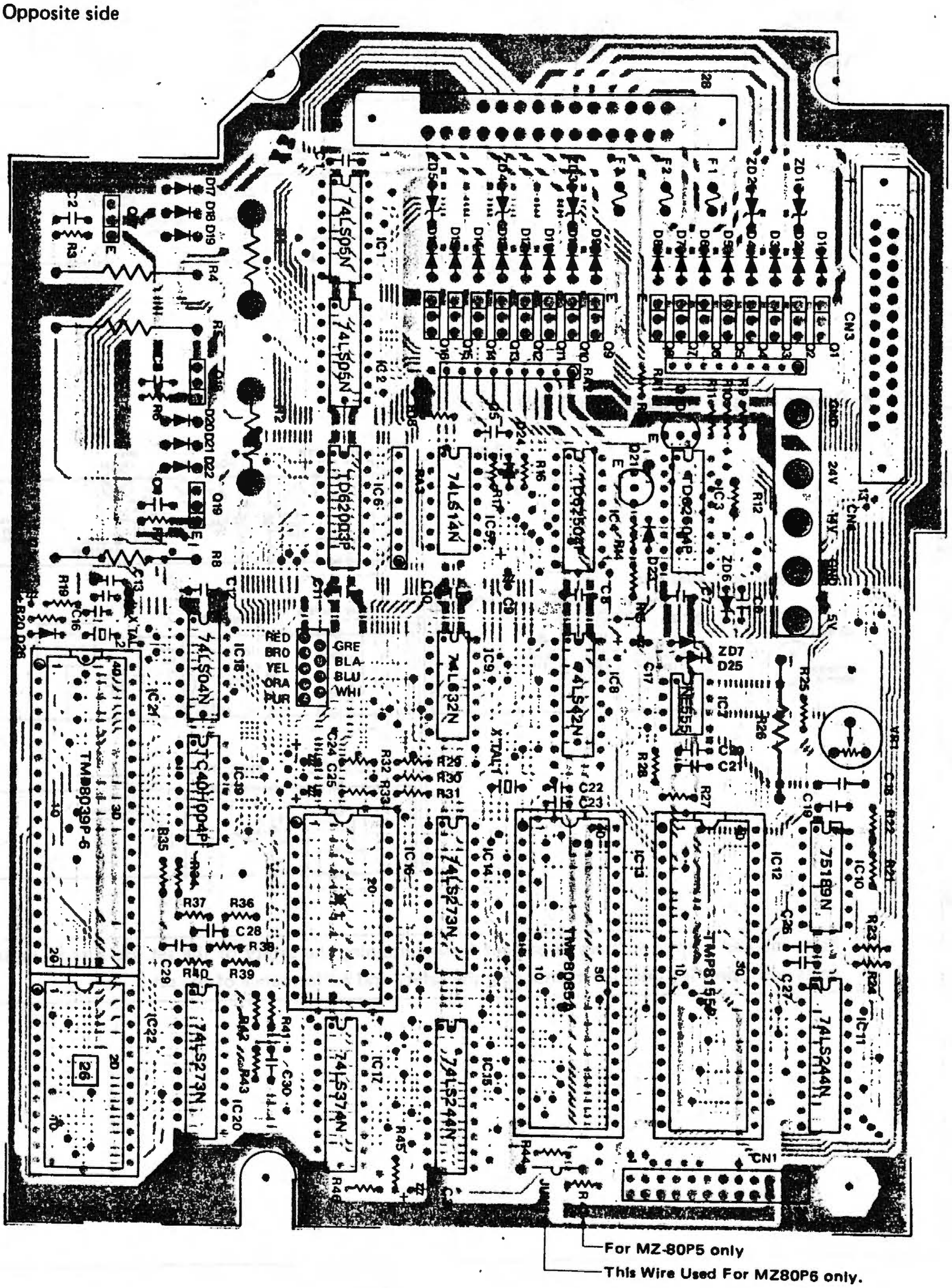
■ **PWB (CPU Board Section)**

Perspective View

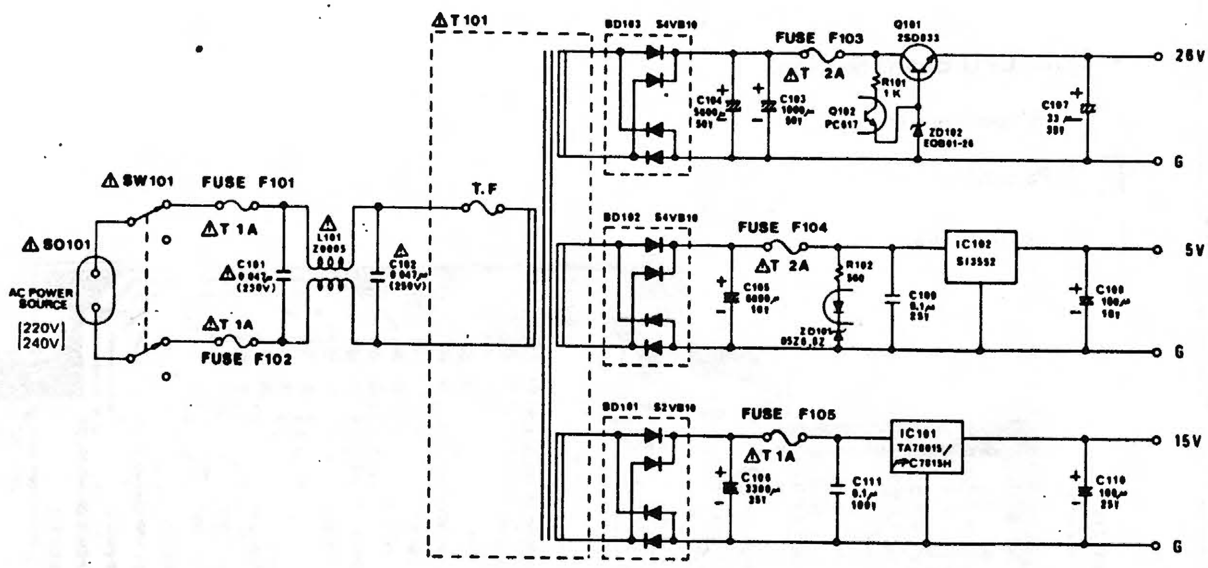
Parts-fitted face

Opposite side

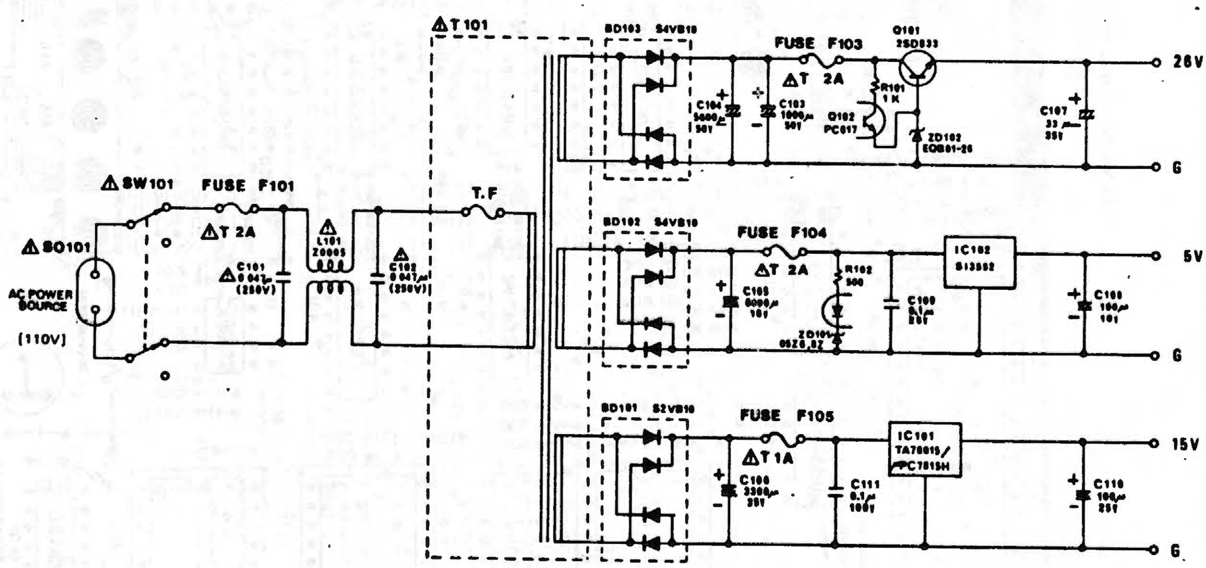
※ MZ-80P5B=48, MZ-80P5A=47,
MZ-80P5= MZ-8BP5R, MZ-8AP5R or MZ-8KP5R



■ Power Supply Circuits (for 220V, 240V)

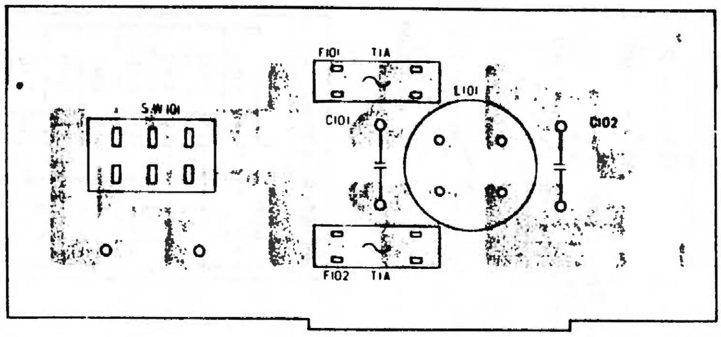


■ Power Supply Circuits (for 110V)

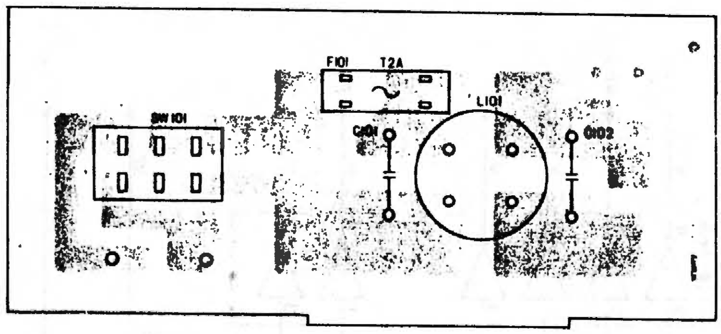


Parts marked with " ⚠ " are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

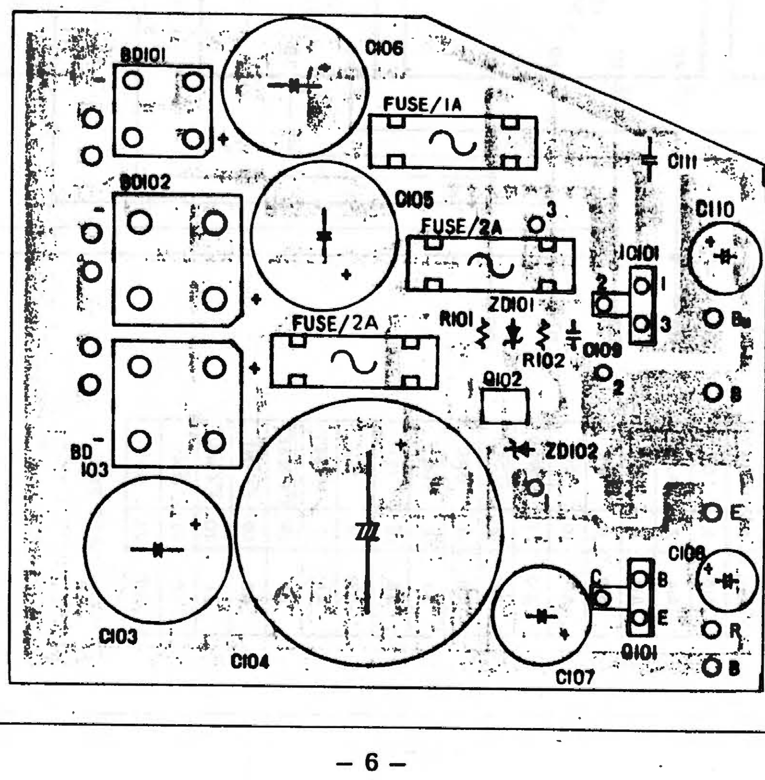
- **Printed Wiring Board (Power Supply Section)**



PRIMARY
(for 220V, 240V)

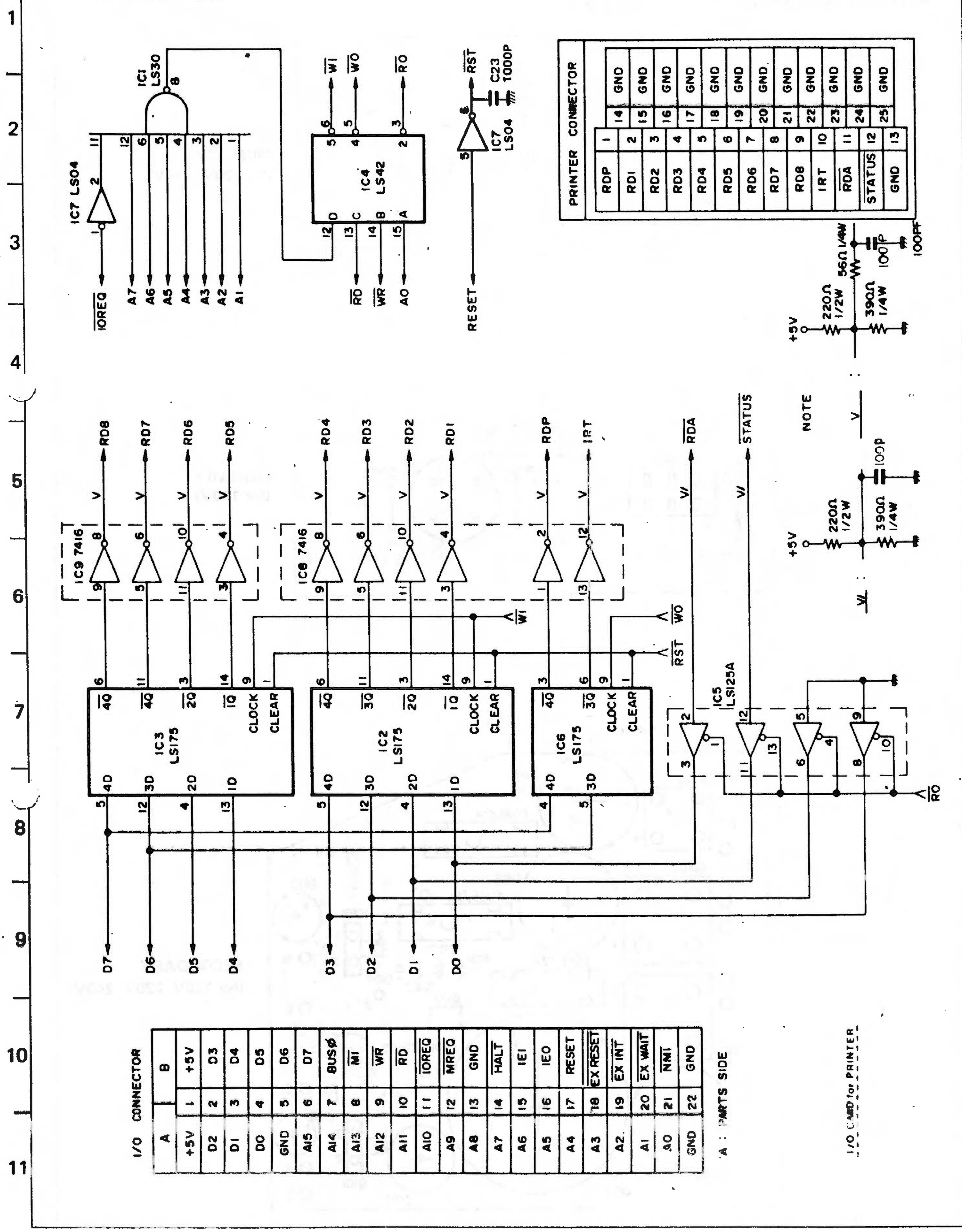


PRIMARY
(for 110V)



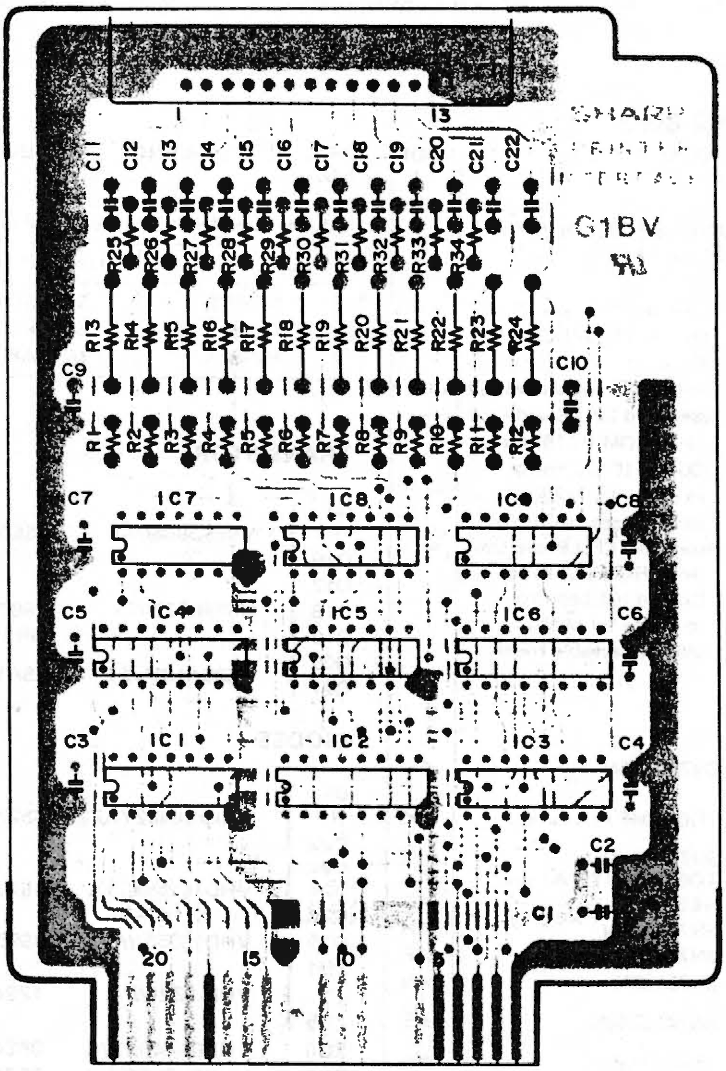
SECONDARY
(for 110V, 220V, 240V)

■ I/O Card Circuits



A | B | C | D | E | F | G | H

■ **Printed Wiring Board (I/O Card Section)**



Perspective View

Parts-fitted face

Opposite side

REPLACEMENT PARTS LIST

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following information.

1. MODEL NAME 2. REF. NO.
3. PART NO. 4. DESCRIPTION

NOTES: Be sure to use regular parts for securing the safety and reliability of the set. Parts marked with " ⚠ " are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

MODEL MZ-80P5

REF. NO.	PART NO.	DESCRIPTION	CODE
		*** CPU BOARD UNIT SECTION *** (New CPU board)	
	DPWB-0307PAZZ	Assembled CPU Board Unit (without ROM(IC16) for CG and IC13 control) (Not replaceable Item)	—
	DPWB-0311PAZZ	Assembled CPU Board Unit (with ROM (IC16) for CG and IC13 Control to be use for MZ80A) (Not replaceable Item)	—
	DPWB-0312PAZZ	Assembled CPU Board Unit (with ROM (IC16) for CG and IC13 control to be use for MZ80A) (Not replaceable Item)	—
		INTEGRATED CIRCUITS	
IC1, IC2	RH-iX0295PAZZ	SN74LS05N	AE
IC3, IC4	RH-IX0292PAZZ	TD62504P (TR Array)	AK
IC5	RH-iX0102PAZZ	SN74LS14N	AM
IC6	RH-IX0272PAZZ	TD62003P (TR Array)	AK
IC7	RH-iX0134PAZZ	NE555	AG
IC8	RH-iX0104PAZZ	SN74LS42N	AH
IC9	RH-iX0078PAZZ	SN74LS32N	AF
IC10	RH-iX0086PAZZ	SN75189N	AN
IC11, IC15	RH-iX0123PAZZ	SN74LS244N	AS
IC12	RH-iX0249PAZZ	TMP8155P	BA
IC13	RH-iX0294PAZZ	TMP8085A (CPU)	AZ
IC14, IC20	RH-iX0250PAZZ	SN74LS273N	AQ
IC16	*	CG-ROM & Data Control	BP
IC17	RH-iX0296PAZZ	SN74LS374N	AN
IC18	RH-iX0074PAZZ	SN74LS04N	AE
IC19	RH-iX0293PAZZ	TC40H004P	AF
IC21	RH-iX0248PAZZ	TMP8039P-6 (CPU)	BB
IC22	DPROM0026PAZZ	ROM & IC21 Control	BB

* ROM (IC 16) may not be come with unit. It's depending on destination and Host computer.

• Parts code, when ROM was installed on CPU board)

Host computer	Parts code	Code
MZ-80B	DPROM0048PAZZ	BP
MZ-80A	DPROM0047PAZZ	BP

• Model name for ROM when ROM is optional

Host computer	Model of ROM
MZ-80B	MZ-8BP5R
MZ-80K	MZ-8KP5R
MZ-80A	MZ-8AP5R

REF. NO.	PART NO.	DESCRIPTION	CODE
		TRANSISTORS	
Q1 ~ Q16	VS2SD986///-1	2SD986	AF
Q17, Q18, Q19	VS2SB772///-1	2SB772 OR (VS2SB743///-1)	AE
Q20, Q21	VS2SA1015//-1	2SA1015	AC
		DIODES	
D1 ~ D22	RH-DX8402YAZZ	S5277B	AB
D23, D24, D26	VHD1S1555//1A	1S1555	AA
D25	VHD1S953///-1	1S953	AB
ZD1 ~ ZD5	VHD-1Z24///-1	1Z24, Zener	AD
ZD6	VHD05Z4R7X/-1	05Z4.7X, Zener	AB
ZD7	VHD05Z5R6Y/-1	05Z5.6L/Y,Zener	AB
		RESISTORS	
R1, R2	VRW-KV3HD121J	120 ohm, 5W	AC
R3, R6, R7	VRD-RU2EE122J	1.2K ohm, ¼W	AA
R4, R5, R8	VRS-PU3DB821J	820 ohm, 2W	AB
R9, R10, R20, R27	VRD-RU2EE332J	3.3K ohm, ¼W	AA
R11, R34, R39	VRD-RU2EE472J	4.7K ohm, ¼W	AA
R12	VRD-ST2HF102J	1K ohm, ½W	AA

MODEL MZ-80P5 PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	CODE
R13, R19, R29, R30, R45	VRD-RU2EE151J	150 ohm, ¼W	AA
R14, R18	VRD-RU2EE222J	2.2K ohm, ¼W	AA
R15, R17, R32, R33, R35, R36	VRD-RU2EE103J	10K ohm, ¼W	AA
R16, R28	VRD-RU2EE101J	100 ohm, ¼W	AA
R21, R22, R31, R40, R42	VRD-RU2EE102J	1K ohm, ¼W	AA
R44, R46, R47	VRD-RU2EE102J	1K ohm, ¼W	AA
R23, R24, R43	VRD-RU2EE471J	470 ohm, ¼W	AA
R25, R37, R38	VRD-RU2EE153J	15K ohm, ¼W	AA
R26	VRS-PU3DB681J	680 ohm, 2W	AB
R41	VRD-RU2EE150J	15 ohm, ¼W	AA
RA1	RR-KZ0071PAZZ	Resistor Array 1.2K ohm x 8	AD
RA2	RR-KZ0038PAZZ	Resistor Array 3.3K ohm x 8	AC
RA3	RR-KZ0037PAZZ	Resistor Array 3.3K ohm x 7	AC
VR1	RVR-M0038PAZZ	Variable Resistor, 22K ohm	AE
CAPACITORS			
C1, C6, C7, C8, C10, C11, C13, C30	VCTYPU1BD104Z	0.1 MFD, 12V, Ceramic	AB
C2, C3, C4, C20, C21	VCKZPR1HF103P	0.01 MFD, 50V, Ceramic	AA
C5, C19, C32	VCKZPR1HF102Z	1,000 PF, 50V, Ceramic	AA
C9	VCEAAU1CW476Y	47 MFD, 16V, Aluminum	AB
C14	VCSACU1VE105K	1 MFD, 35V, Tantalum	AC
C15, C16	VCCCPU1H3220J	22PF, 50V, Ceramic	AA
C17	VCEAAU1CW106Y	10 MFD, 16V, Aluminum	AB
C18	VCQYKU1HM104K	0.1 MFD, 50V, Film	AB
C22, C23	VCCCPU1H3100D	10 PF, 50V, Ceramic	AA
C24, C25, C31	VCEAAU1HW150Y	1 MFD, 50V, Aluminum	AB

REF. NO.	PART NO.	DESCRIPTION	CODE
C26, C27	VCCSPR1H6221J	220 PF, 50V, Ceramic	AA
C28, C29	VCQYKU1HM103K	0.01 MFD, 50V, Film	AB
MISCELLANEOUS			
X'TAL1, X'TAL2	RCRSA0013PAZZ	Crystal, 6MHz	AP
⚠F1, ⚠F2	QFS-J0001PAZZ	Fuse, 1A	AH
⚠F3	QFS-J0002PAZZ	Fuse, 2A	AH
CN2	QSOCZ0017PAZZ	28-Pin Socket	AL
CN3	QPLGZ0086PAZZ	25-Pin Terminal	BF
33	DSOCN0151PAZZ	Lead Wire with 9-Pin Socket	AK
34	QLUGP0003PAZZ	1-Pin Lug	AA
	QSOCZ0010PAZZ	24-Pin IC Socket	AF
	QSOCZ0012PAZZ	40-Pin IC Socket	AH
35	QPLGN0504CEZZ	5-Pin Terminal	AB
***** SWITCH PWB UNIT SECTION *****			
	DPWB-0310PAZZ	Assembled Switch PWB Unit (Not replacement item)	—
DIODES			
D1	RH-PX0047PAZZ	LED (Green)	AD
D2	RH-PX0033PAZZ	LED (Red)	AD
RESISTORS			
R4	VRD-SC2EF121J	120 ohm, ¼W	AA
R5	VRD-SC2EF271J	270 ohm, ¼W	AA
MISCELLANEOUS			
SW1, SW2	QSW-P0010PAZZ	Top of Form, Line Feed, Switch	AD
BUZZER	PALMB0003PAZZ	Buzzer	AH
1	DSOCN0164PAZZ	Lead Wire with 9-Pin Socket	AG
2	PSPAK0006PAZZ	LED Spacer	AA
***** POWER SUPPLY UNIT SECTION *****			
	DBOXD0017PAZZ	Assembled Power Supply Unit (Not replaceable item) (for 220V)	—
	DBOXD0027PAZZ	Assembled Power Supply Unit (Not replaceable item) (for 240V)	—
	DBOXD0032PAZZ	Assembled Power Supply Unit (Not replaceable item) (for 110V)	—
INTEGRATED CIRCUITS			
IC101	RH-iX0268PAZZ	TA78015, 15V-Regulator	AK
IC102	RH-iX0269PAZZ	Si3552, 5V-Regulator	AV
TRANSISTORS AND DIODES			
Q101	VS2SD833///-1	2SD833	AL
Q102	RH-PX2001YAZZ	PC617 Photo-coupler	AK

MODEL MZ-80P5 PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	CODE
BD101	VHDS2VB10//-f	S2VB10, Bridge Diode	AG
BD102, BD103	VHDS4VB10//-F	S4VB10, Bridge Diode	AK
ZD101	VHE05Z6R8Z/1A	05Z6R8Z, Zener Diode	AB
ZD102	VHEEQB0126/-1	EQB01-26, Zener Diode	AD

RESISTORS

REF. NO.	PART NO.	DESCRIPTION	CODE
R101	VRD-RU2EE102J	1K ohm, ¼W	AA
R102	VRD-RU2EE561J	560 ohm, ¼W	AA

CAPACITORS

REF. NO.	PART NO.	DESCRIPTION	CODE
⚠ C101, ⚠ C102	RC-CZ0180PAZZ	0.047 MFD, 250V, Line Capacitor	AH
C103	VCEAAU1HM108M	1,000MFD, 50V, Aluminum	AF
C104	VCEAAQ1HC568Y	5,600MFD, 50V, Aluminum	AP
C105	VCEAAU1CM688M	6,800MFD, 16V, Aluminum	AG
C106	VCEAAU1VM338M	3,300MFD, 35V, Aluminum	AG
C107	VCEAAU1VW336M	33MFD, 35V, Aluminum	AC
C108	VCEAAU1AW107M	100MFD, 10V, Aluminum	AB
C109	VCTYPU1ED104Z	0.1MFD, 25V, Ceramic	AB
C110	VCEAAU1EM107M	100MFD, 25V, Aluminum	AB
C111	RC-QZ0003PAZZ	0.1MFD, 100V, Film	AB

MISCELLANEOUS

REF. NO.	PART NO.	DESCRIPTION	CODE
⚠ T101	RTRNP0048PAZZ	Power Supply Transformer (for 220V)	BB
⚠ T101	RTRNP0056PAZZ	Power Supply Transformer (for 240V)	BB
⚠ T101	RTRNP0060PAZZ	Power Supply Transformer (for 110V)	BB
⚠ L101	RTRNZ0005PAZZ	Line Coil	AL
⚠ F101, ⚠ F102, ⚠ F105	QFS-C0005PAZZ	Fuse, T1A (for 220, 240V)	AE
⚠ F103, ⚠ F104	QFS-C2002TAZZ	Fuse, T2A (for 220, 240V)	AD
⚠ F101, ⚠ F103, ⚠ F104	QFS-C2002TAZZ	Fuse, T2A (for 110V)	AD
⚠ F105	QFS-C0005PAZZ	Fuse, T1A (for 110V)	AE
⚠ SW101	QSW-C0003PAZZ	A.C Switch	AQ
⚠ SO101	QSOCA0003PAZZ	Appliance Inlet	AF
3	DSOCN0159PAZZ	Lead Wire with 5-pin Socket	AG
4	PRDAR0034PAZZ	Radiator	AW
	QFSHA0001PAZZ	Fuse Holder	AA
5	LANGK0325PAZZ	Switch Fixing Metal	AE
6	PRDAR0043PAZZ	Sub Radiator	AG
7	PSPAN0005VAZZ	PWB Fixing Spacer	AA
8	QLUGP0005PAZZ	Appliance Inlet Joint Pin	AA
	PZETN0009VAZZ	Insulating Washer (for TA78015)	AA
	PSPAM0001VAZZ	Insulating Sheet (for TA78015)	AA
36	PSPAY0003PAZZ	Insulating Cover	AB

* * * OTHER SECTION * * *

REF. NO.	PART NO.	DESCRIPTION	CODE
9	GCABA8207PASA	Cabinet A (bottom)	BF
10	GCABB8207PASA	Cabinet B (upper)	BK
11	DCABC8207PASA	Cover Assy	AU
11-1	GCOVA0005PASA	Cover	AQ
11-2	GCOVA0006PASA	Transparent Cover	AM
12	PGUMS1010PASA	Foot	AC
⚠ 13	TSPCE0015PAZZ	Specification Panel (for 220V)	AE
⚠ 13	TSPCE0034PAZZ	Specification Panel (for MZ-80P5B, SEEG, SESA)	AE
⚠ 13	TSPCE0035PAZZ	Specification Panel (for MZ-80P5A, SEEG, SESA)	AE
⚠ 13	TSPCE0021PAZZ	Specification Panel (for 240V)	AE
⚠ 13	TSPCE0024PAZZ	Specification Panel (for 110V)	AK
14	HBDGD0004PASA	Badge	AD
15	HBDGB1002CES/	SHARP Badge	AC
16	PGUMZ0002PAZZ	Rubber (A)	AB
17	PGUMZ0003PAZZ	Rubber (B)	AC
18	PGUMZ0004PAZZ	Rubber (C)	AC
19	GCOVA0007PASA	Connector Cover	AG
20	DSOCZ0010PAZZ	Signal Cable	BP
21	DBTN-0002PASA	Top of Form, Line Feed Switch Button Assy	AM
22	LSTYM0009PAZZ	Hinge (Right)	AE
23	LSTYM0010PAZZ	Hinge (Left)	AE
24	LX-BZ0076PAZZ	Screw	AC
25	DKNB-0002PASA	Knob with Spring	AG
26	LFiX-0009PAZZ	Hinge (R) (L) Fixing Metal	AB
27	LSTYP0001PAZZ	Stay for CPU Board	AB
28	DGiD-0005PAZZ	Paper Guide	AX
29	PGiDP0001PAZZ	Paper Guide Roller	AG
	DTiP-0052PAZZ	Braided Wire	AT
30	LBNDC0001PAZZ	Cord keeper	AC
31	PKYU-0001PAZZ	Sound-deadening Material	AG
32	LX-BZ0079PAZZ	Frame Ground Terminal	AG
37	PZETV0019PAZZ	Insulating Sheet	AC
38	MSPRP0080PAZZ	Spring	AE
39	QTiPZ0022PAZZ	Tip with Lead Wire (CPU-FG Terminal)	AB
	TCAUE0010PAZZ	PROTECTOR FOR PAPER SENSOR	AB
⚠	QACCK0050AFZZ	A.C. Cord (for SEEG)	AQ
⚠	QACCB0001PAZZ	A.C. Cord (for UK, SESA)	AQ
⚠	QACCL0001PAZZ	A.C. Cord (for SCA)	AQ
⚠	QACCU0001PAZZ	A.C. Cord (for TAIWAN)	AL
⚠	TLABH0002PAZZ	Label for A.C. Cord (for UK, SESA)	AC
	94VERC-04-1//	Ink Ribbon (with Cartridge Case)	BB
	94VER-04-1///	Ink Ribbon (Non Cartridge Case)	AX
	TiNSE0046PAZZ	Instruction Manual (English)	AZ
	TiNSE0047PAZZ	Instruction Manual for complement (English)	AL

* * * I/O CARD UNIT SECTION * * *

(May be handled by under the optional item "MZ-80BP5i", depending on destination.)

INTEGRATED CIRCUITS

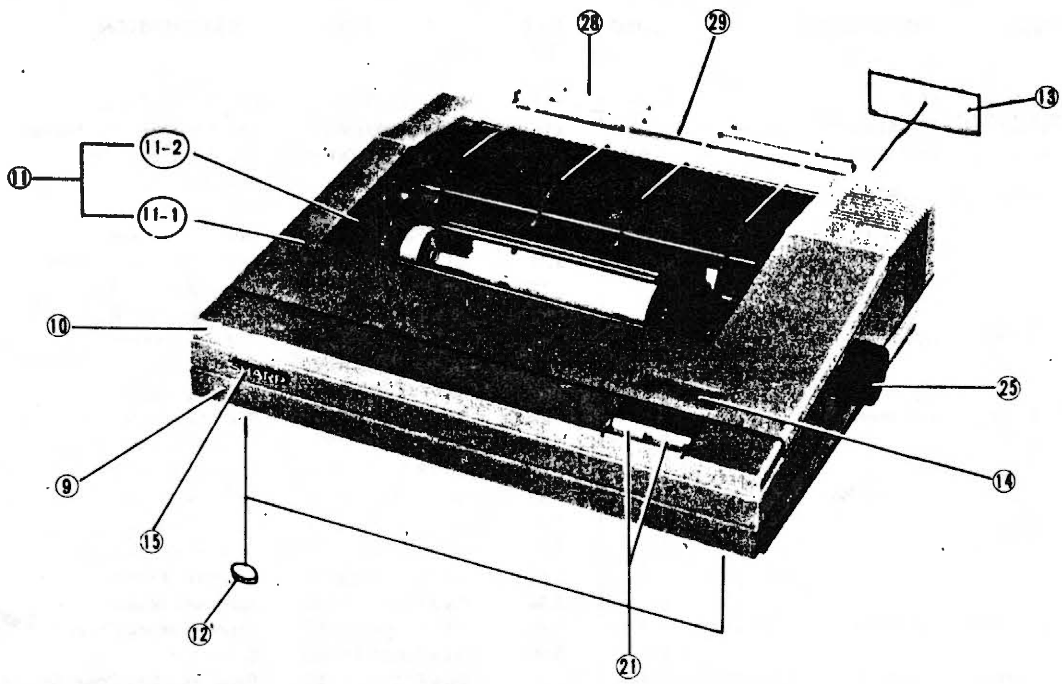
REF. NO.	PART NO.	DESCRIPTION	CODE
IC1	RH-iX0077PAZZ	SN74LS30N	AE
IC2, IC3, IC6	RH-iX0181PAZZ	SN74LS175N	AM

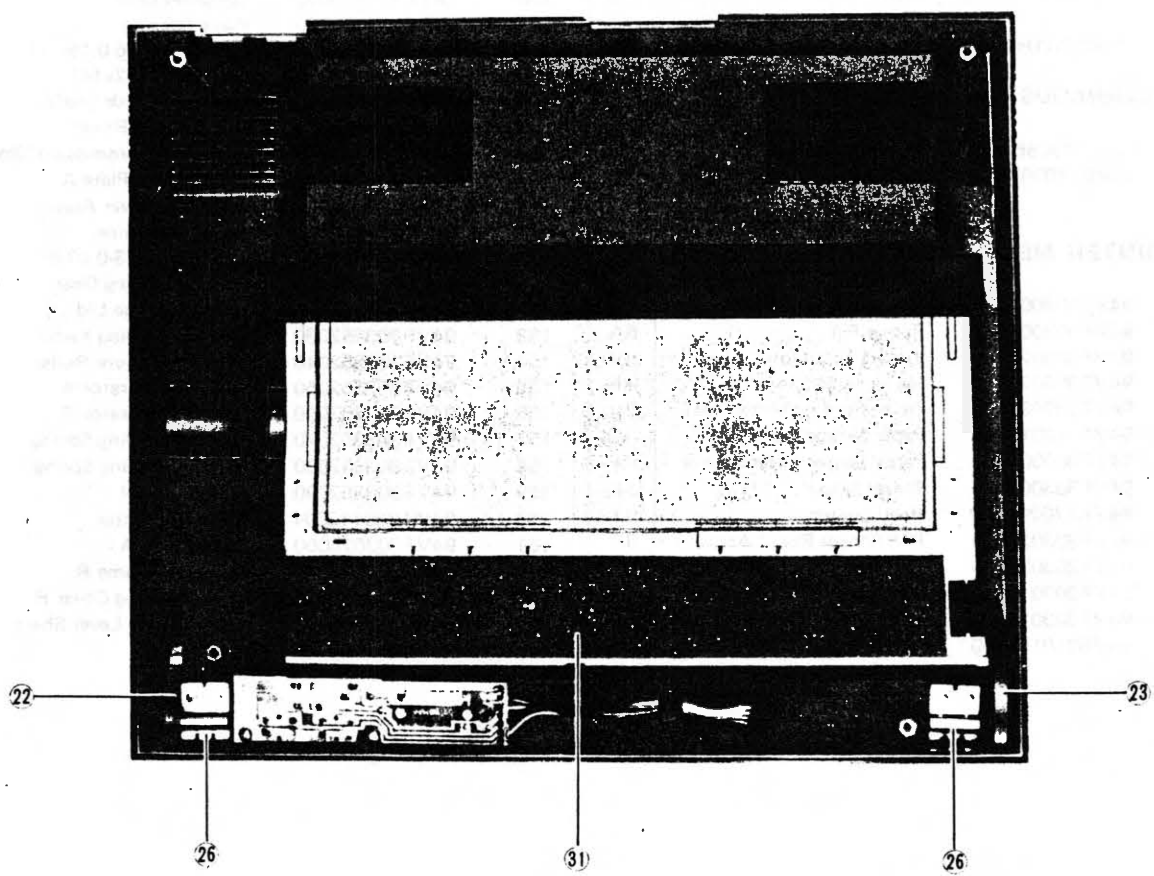
MODEL MZ-80P5 PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	CODE
IC5	RH-iX0141PAZZ	SN74LS125N	AK
IC4	RH-iX0104PAZZ	SN74LS42N	AH
IC7	RH-iX0074PAZZ	SN74LS04N	AE
IC8, IC9	RH-iX0013PAZZ	SN7416N	AF
RESISTORS			
R1 ~ R12	VRD-RU2EE391J	390 ohm, ¼W	AA
R13 ~ R24	VRD-ST2HF221J	220 ohm, ½W	AA
R25 ~ R34	VRD-RU2EE560J	56 ohm, ¼W	AA
CAPACITORS			
C1	VCEAAU1CW107Y	100MFD, 16V, Aluminum	AB
C2 ~ C10	VCTYPU1BD104Z	0.1MFD, 12V, Ceramic	AB
C11 ~ C22	VCCCPR1H3101J	100PF, 50V, Ceramic	AA
C23	VCKYPU1HB102K	1,000PF, 50V, Ceramic	AA
MISCELLANEOUS			
	QPLGZ0086PAZZ	25-Pin Terminal	BF
	LANGK0297PAZZ	25-Pin Terminal Fixing Metal	AG
*** **PRINTER MECHANICAL UNIT SECTION** ***			
101	94VF303002000	Frame LA	AZ
102	94VF303003000	Frame RA	BA
103	94VF303027000	Timing Belt Motor Assy	BV
104	94VF303026010	Motor Heat Sinker	AR
105	94VF303031000	Paper Feeding Motor Assy	BU
106	94VF310011000	Paper Sensor Lever A	AQ
107	94VF303007020	Paper Senser Lever Spring	AE
108	94VF303009010	Senser Board	AK
109	94VA170202502	Reed Switch	AK
110	94VF303029000	PTS Sensor Board Assy	BD
111	94VF303030000	Home Position Sensor Assy	BE
112	94VF303014010	Timing Belt	BB
113	94VF303017000	Belt Driving Pulley	AH
114	94VB210151490	Ball Bearing	AY
115	94VF303018010	Belt Driven Pulley	AH
116	94VF303018020	Belt Driven Pulley Flange	AE
117	94VF303019000	Belt Tension Plate	AT
118	94VF303004000	Platen A	BK
119	94VF303006000	Carriage Assy A	AZ
120	94VF303005010	Head Lock Lever	AK
121	94VF303005020	Head Lock Lever Spring	AC
122	94VF303001010	Carriage Shaft A	BD
123	94VF303001020	Carriage Shaft B	BK
124	94VF303001030	Adjusting Lever	AN
125	94VF303001050	Scale	AX
126	94VF303001060	Scale Spring L	AF
127	94VF303001070	Scale Spring R	AF
128	94VF303001092	Ribbon Mask	AL
129	94VF303001100	Head Sitting Plate	AH
130	94VF401100000	Print Head Unit	BU
131	94VF303007011	Outer Paper Guide	BA
132	94VF303001040	Inner Paper Guide	AY
133	94VF303036010	Sprocket Frame L	AX
134	94VF303011020	Sprocket Wheel	AR
135	94VF303036020	Paper Holding Cover L	AQ
136	94VF303011060	G-Pin	AC
137	94VF303011040	Paper Holding Cover Spring	AD
138	94VF303011050	Sprocket Lock Lever	AL
139	94VF303013010	Sprocket Shaft	BF
140	94VF303013020	Sprocket Gear	AK
141	94VF304004020	Plane Bearing	AK
142	94VB101251490	Leaf Spring (6-0.15-11)	AB
143	94VB130103216	Spring Pin (ϕ2x14)	AB
144	94VF303010010	Sprocket Guide Shaft	AQ
145	94VF303010020	Paper Guide Roller	AT
146	94VF303001080	Sprocket Transmission Gear	AK
147	94VF303021001	Paper Guide Plate A	AZ
148	94VF303020000	Planetary Lever Assy	AN
149	94VF303020020	Planetary Pinion	AG
150	94VB101252190	Leaf Spring (3-0.07-6)	AC
151	94VF303014020	Ribbon Driving Gear	AN
152	94VF303352010	Cartridge Case Lid	AX
153	94VF303352030	Ribbon Feeding Knob	AK
154	94VF303352040	Ribbon Pressure Roller	AK
155	94VF303352050	Ribbon Separator A	AK
156	94VF303352060	Ribbon Separator B	AK
157	94VF303352070	Ribbon Feeding Spring	AE
158	94VF303352080	Ribbon Braking Spring	AE
159	94VF303352090	Ribbon Label	AH
160	94VA260112001	Head Connector	AP
161	94VF303025000	3210 Cable A	BL
162	94VF303037010	Sprocket Frame R	AX
163	94VF303037020	Paper Holding Cover R	AQ
164	94VF310009020	Paper Senser Lever Shaft	AD
165	94VF303023010	Edge Cover	AC

A B C D E F G H

DISASSEMBLED VIEWS





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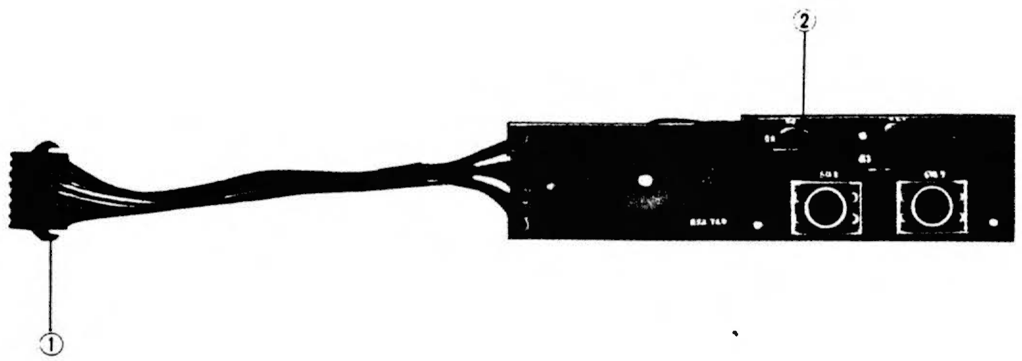

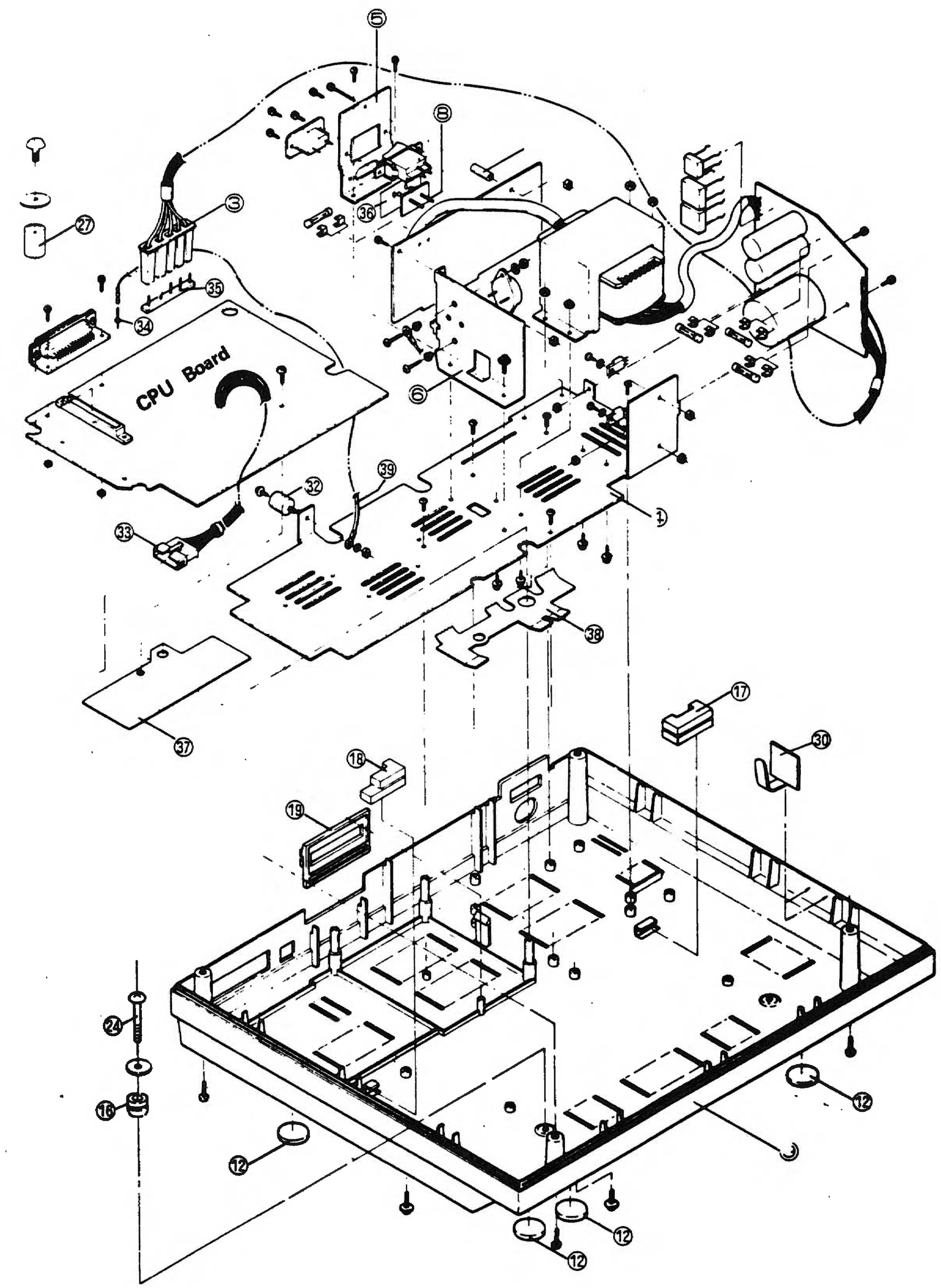

■ **Printer Mechanical**